



Economic and Social Council

Distr.: General
15 December 2011

Original: English

Statistical Commission

Forty-third session

28 February-2 March 2012

Item 3 (g) of the provisional agenda*

Items for discussion and decision: energy statistics

Compilation of natural gas statistics

Report of the Secretary-General

Summary

The present report contains a review of international activities in the collection and compilation of statistics on natural gas and an overview of the main problems that countries and organizations face in that area. The report also contains an outline of the work programme that the Statistics Division, in cooperation and coordination with other international and regional organizations, intends to undertake to improve annual and monthly collections on natural gas statistics. The Statistical Commission is invited to express its views on the assessment of the current situation and the proposed activities.

Points for discussion by the Commission are set out in paragraph 32 of the report.

* E/CN.3/2012/1.

I. Introduction

1. The adoption of the International Recommendations for Energy Statistics by the Statistical Commission at its forty-second session, held from 22 to 25 February 2011, has set the basis for the improvement of official energy statistics by harmonizing concepts and definitions and developing the Standard International Energy Product Classification. Additional guidance on more practical and technical matters to assist countries in implementing the recommendations set out in the International Recommendations is being developed in the Energy Statistics Compilers Manual. While the International Recommendations cover all energy statistics, some areas deserve increased attention due to their importance and warrant a more detailed or frequent data collection than what is recommended as a minimum data set in the International Recommendations. One of the areas relates to natural gas statistics and the need to further elaborate the recommendations to improve their quality and availability.

2. There is a need for more detailed, timely and reliable statistics on natural gas in order to accurately monitor the current situation and provide policymakers, analysts and other users with relevant information. This is due to the increasing importance of natural gas as an energy source at the global level, the complexity of the gas market due to the increased demand for and trade of natural gas, and the need for accurate data on the estimation of greenhouse gas emissions. Detailed monthly data collections on crude oil and oil products, another major energy source, are already being made through the Joint Organisations Data Initiative. Considering the importance of natural gas, a similar approach may be undertaken for this energy source. The present report assesses the current status of natural gas statistics and proposes actions to improve their availability, coverage and timeliness.

3. Section II of the report contains more background on the need for natural gas statistics; section III provides an overview of the main challenges in the collection and compilation of natural gas statistics; section IV contains a review of the activities on natural gas statistics at the international level; and section V sets out an outline of the proposed activities for improving the availability and quality of natural gas statistics. Section VI contains points for discussion by the Commission.

4. The report has been prepared with support from Statistics Norway, the International Energy Agency and Eurostat. Their comments and contributions are thankfully acknowledged. The report also draws on information published in the World Energy Council's *2010 Survey on Energy Resources*, the International Energy Agency's *World Energy Outlook 2010* and a study report on natural gas statistics commissioned by the International Energy Forum in 2009.

II. Importance of high-quality statistics on natural gas

5. Natural gas is considered one of the cleanest and most efficient fossil fuels and is becoming an increasingly important form of energy because of its role in helping to meet environmental challenges and mitigate climate change. The production and consumption patterns of natural gas are evolving both at the national and international levels due to two main driving forces: on the one hand, with growing concerns about climate change and increasing greenhouse gas emissions through the use of different energy products, natural gas is often a viable alternative compared

with other fossil fuels because of its much lower carbon content; on the other hand, the availability of natural gas is plentiful and expected to grow.

6. Overall, the demand for natural gas has steadily increased in the past 20 years. In 2009, the global demand for natural gas was more than 50 per cent higher than in 1990. It is expected that global demand will further increase in the next 20 years. While this trend is observed across all regions (Africa, North and South America, Asia, Europe and Oceania), it is particularly strong in Asia owing to the sharp increase in demand of China and India.

7. In terms of sectoral trends in demand, the use of natural gas for power generation is expected to continue to increase, and that sector is expected to lead the demand for natural gas in most regions. In addition, because of the higher thermal efficiency of some types of gas power stations, such as combined cycle gas turbines, natural gas presents definite environmental advantages over other fossil fuels, such as coal and oil. Further development of carbon capture and storage technology will lower emissions from gas power plants and make natural gas an even more environmentally friendly alternative. While still very limited at present, the demand for natural gas as feedstock in gas-to-liquids plants is also expected to increase rapidly due to the recent increases in capacity of such plants, which convert natural gas into liquid fuels as alternative to the traditional refining of crude oil.

8. The final sector in which demand for natural gas is expected to grow is the industry sector. The *World Energy Outlook 2010* contains forecasts of a 1.3 per cent annual increase in industrial demand for natural gas from 2008 to 2035. Major uses of natural gas in the industry sector include as feedstocks in energy transformation plants and the non-energy use of fertilizer production. Also, the use of natural gas as a road transport fuel, although still limited in terms of total final demand, is expected to grow in a number of countries. While that use is not likely to become significant on a global scale (in 2009 it amounted to about 1 per cent of the total final consumption of natural gas) since it requires the establishment of infrastructure and adaptation of vehicles to a different fuel, it is certainly a growing trend that needs to be accurately monitored. Finally, the consumption of natural gas in household, commerce and public service activities is also expected to grow in selected countries. While for many developed countries there is a saturation effect in the use of gas to heat water and space, a rapid growth in the use of gas in buildings is expected in selected developing countries.

9. In the past 20 years, there has been a steady increase in the trade of natural gas as measured by total exports. That is partly due to the asymmetry between countries with regard to their production and use of natural gas. Some countries export large quantities, while others rely heavily on imports for their own final demand for natural gas. In addition, the increase in liquefaction capacity has also brought an increase in the trade of liquefied natural gas, which makes it more cost-effective to transport natural gas over long distances where pipelines do not exist. Once transported, liquefied natural gas is regasified and distributed as pipeline natural gas. This has changed the overall market. The asymmetry also underlines the need for statistics from all countries, not just major producers, to be collected in order to obtain a complete picture of the production, trade and different uses of natural gas.

10. The existence of reliable information on stocks of natural gas is particularly important for energy security and planning at the national, regional and international levels. Such information makes it easier to take informed decisions on national

storage systems and to develop measures for the security of gas supplies, such as minimum standards, crisis measures and supply contracts.

11. In terms of reserves/resources, the availability of natural gas in the environment is sufficiently abundant to cover global gas demands for many decades. While most of the reserves/resources consist of conventional gas, an increasing proportion constitutes unconventional gas, including shale gas, coal bed methane and tight gas.

12. As indicated above, statistics on all aspects of natural gas are also used as input data for energy balances, the System of Environmental Economic Accounts for Energy and the System of National Accounts. Improvements in their quality, availability and consistency will also benefit the quality of statistical tabulations at the national and international levels.

13. The strong interest in detailed information on natural gas and associated flows for the evaluation of gas markets and developments at the global level creates additional needs for such statistics not only on an annual basis, but also on a more frequent, monthly basis.

III. Main challenges

14. The International Recommendations for Energy Statistics have set the basis for the development of official energy statistics by harmonizing the concepts, definitions, classifications and methods for their collection and compilation. However, certain issues pose intrinsic challenges for natural gas, indicated below, and call for additional and specific guidelines to be introduced in order to ensure the quality of the statistics produced.

15. **Measurement issues.** While there is international agreement that natural gas should be collected in volume units such as cubic metres and also in energy units such as joules, there are some elements that may affect the comparability of information, such as the temperature and pressure conditions under which measurements and reportings are taken; the use of gross or net calorific values in the collection and reporting of natural gas statistics when converting to energy units; or the measurement point for the production of natural gas, for example dry versus wet output of processing plants, which may differ in certain countries. The International Recommendations for Energy Statistics provide a number of recommendations on measurement issues, but there is a need to focus on the consistent application of the recommendations in order to ensure international comparability of the statistics.

16. **International trade.** In order to understand the international trade of natural gas, it is important to have information on the country of ultimate origin and destination for the assessment of national energy security. However, such information is generally not easy to identify owing to the complex and extensive network of cross-border pipelines that transport natural gas between non-contiguous countries. The transportation of liquefied natural gas by ship poses an additional problem, since the country of destination may not be known on departure. Information on the volume of gas entering and exiting a country can be easily assessed, but often also includes the volume of gas in transit, which should not be included in natural gas import and export statistics. Clearer guidance may be needed on how to record flows of natural gas that may involve temporary storage in the transit country, or the resale or redirection of natural gas in transit.

17. Resources and reserves. The availability of reliable information on reserves and resources of natural gas is of great importance for the assessment of national wealth. In many countries, such reserves and resources are a major contributor to national wealth, and their reliable measurement is the basis for assessments of the reliance upon and depletion of such resources. Internationally agreed definitions and classifications of resources and reserves of natural gas are fundamental to ensure the comparability of information. The System of Environmental Economic Accounts for Energy provides definitions and classifications based on the work of the United Nations Framework Classification for Fossil Energy and Mineral Resources. Further guidance on their implementation is expected to ensure uniform applications.

18. Flaring, venting and reinjection during natural gas extraction. While statistics on the primary production of natural gas exclude quantities concerning flaring, venting and reinjection during natural gas extraction, they are nonetheless important for environmental concerns. Statistics on flaring and venting are particularly important because of their impact on greenhouse gas emissions and are therefore generally reported separately.

19. Statistical differences in balancing energy supply and demand. The quality of gas statistics depends on how reliable, precise and consistent the collected gas data are. When data on the supply and use of gas are put together in an energy balance, high statistical differences might appear, which indicate errors in the basic statistics for gas. The possible reasons for such differences could be uncertainty in the gas data reported to the statistical offices or incomplete data coverage, for instance, when complete information on reinjection or consumption is not available in all countries. Methodological problems or differences are another possible explanation. Entities that compile statistics for production, exports, consumption, prices or value figures often use different data sources or data processing methods, which can lead to inconsistencies and discrepancies when data are put together and compared. Such problems can be avoided by following recommendations or technical guidance for the compilation of gas statistics.

20. Prices of natural gas. Natural gas prices are an important input for the construction of economic indicators and the assessment of the economic performance. In many cases, reliable and detailed data on such prices may be difficult to obtain. For analytical purposes, there is a need for information on the components of the different prices, which presents the challenge of correctly identifying the costs for transporting gas and of correctly adjusting the price according to the purpose of the statistics.

21. Statistical confidentiality. The issue of confidentiality in providing and releasing relevant data may arise in countries where there are few companies trading or supplying natural gas. In such cases, there is an issue of balance between the application of statistical confidentiality, as one of the fundamental principles of official statistics, and the need for public information and for complete information on the different flows related to natural gas required to draw up energy balances or energy accounts. Additional guidance may be needed on how to balance the respect for confidentiality with the need to preserve and increase the relevance of the statistics.

IV. Existing international activities in international energy statistics

22. Annual natural gas statistics are collected by a number of international and regional organizations, resulting in good coverage of the annual natural gas transactions of countries. Consistent implementation of the definitions and recommendations set out in the International Recommendations for Energy Statistics should further improve the comparability of different data sources.

23. The availability of monthly natural gas statistics varies considerably. Detailed monthly statistics are collected by the International Energy Agency and Eurostat as part of the monthly oil statistics questionnaire. There is also a well-established time series, in which statistics are comprehensively collected and presented for the month before last. Eurostat also collects natural gas data from member States and candidate countries of the European Union for the past month on such key flows as primary production, imports, exports, stock change, stock levels and calculated supplies of natural gas. In addition, Eurostat collects semestrial natural gas prices in the European Union at three levels of taxation, the various bands depending on the size of the industrial or household consumers. In 2007, the Asia-Pacific Economic Cooperation (APEC) began an experimental collection and publication of monthly natural gas data on natural gas production, consumption, trade and stocks. The Statistics Division collects monthly statistics on the production of natural gas through the Monthly Bulletin of Statistics. Some of the above-mentioned collections are based on legal directives, while others are carried out on a voluntary basis.

24. While there is increasing demand for short-term, detailed statistics on natural gas, the current situation shows a lack of detailed information on the supply and demand side on a monthly basis for countries that are not members of the Organization for Economic Cooperation and Development. This information is important in order to understand the market, plan future supplies and demand, and take decisions on investments.

V. Priority areas for future work on natural gas statistics

25. Based on the considerations described above, the Statistics Division, in coordination with other stakeholders in the area of energy statistics, is planning to focus on (a) the development of methodological guidelines; (b) data collection; and (c) training and technical assistance to countries.

26. The development of specific methodological guidelines for the collection and compilation of natural gas statistics, in line with the recommendations provided in the International Recommendations for Energy Statistics, is an important requirement for the improvement of such statistics. The Statistics Division, in cooperation with the Oslo Group on Energy Statistics and the London Group on Environmental Accounting, is preparing the Energy Statistics Compilers Manual, which aims to provide practical guidance in the implementation of the International Recommendations for Energy Statistics. As part of that work, special attention will be given to the collection and compilation of structural statistics on natural gas.

27. In line with the Statistics Division work plan endorsed by the Statistical Commission at its forty-second session, the Division is revising its annual

questionnaire on energy statistics to reflect the updated International Recommendations for Energy Statistics and to harmonize it with the questionnaire of the International Energy Agency, Eurostat and the Economic Commission for Europe, in order to reduce the burden of response and facilitate data exchange. As part of the revision, elements will be considered for the improvement of the availability and quality of natural gas statistics.

28. In response to the need for short-term, detailed natural gas statistics, the Statistics Division is cooperating with other international/regional agencies such as APEC, Eurostat, the International Energy Agency, the Latin American Energy Organization, the Gas Exporting Countries Forum and the International Energy Forum. While the International Energy Forum performs a coordination function, the other six agencies collect, on an experimental basis, monthly statistics on production, imports, exports, stocks, stock changes and gross inland deliveries of natural gas through the Joint Organisations Data Initiative gas questionnaire. An increasing number of countries submit such monthly data.

29. The Statistics Division, in cooperation with the organizations of the Joint Organisations Data Initiative, is preparing a manual to assist countries in the collection and compilation of monthly natural gas statistics. The manual will be produced in line with the International Recommendations for Energy Statistics and will further expand on specific issues related to the monthly collection of natural gas statistics. The Division plans to host an expert group meeting on the development of the manual for natural gas statistics to draw on the expertise of countries that successfully compile such statistics and can contribute to common guidelines.

30. Training and technical assistance activities to countries will be provided to familiarize countries with the guidelines in the International Recommendations for Energy Statistics, those developed in the context of the Energy Statistics Compilers Manual and those specifically relating to natural gas statistics. Training activities for natural gas statistics will be integrated as much as possible into existing or planned activities, such as regional workshops, training courses and internships.

31. Special attention will be paid to additional requirements and difficulties resulting from the need for statistics to be produced at a higher frequency, such as monthly natural gas statistics.

VI. Points for discussion

32. **The Commission is invited to:**

(a) **Endorse the proposed activities on natural gas statistics, specifically the development of detailed methodological guidance and the conduct of training activities;**

(b) **Endorse the establishment of a worldwide database on monthly natural gas statistics as described in paragraph 28 above and encourage countries to participate in the initiative.**

**Economic and Social Council**

Distr.: General
15 December 2011

Original: English

Statistical Commission**Forty-third session**

28 February-2 March 2012

Item 3 (h) of the provisional agenda*

**Items for discussion and decision: statistics for economies
based on natural resources**

**Joint report of Mongolia and Australia on the establishment
of an Ulaanbaatar group on statistics for economies based
on natural resources**

Note by the Secretary-General

The Secretary-General has the honour to transmit the joint report of Mongolia and Australia on the establishment of an Ulaanbaatar group on statistics for economies based on natural resources. Many countries with rapidly growing industries based on natural resources, particularly mining, are facing methodological challenges. At the international level, better information is needed on activities based on natural resources. To help address these issues, it is proposed that a new group, the Ulaanbaatar group on statistics for economies based on natural resources, be established. The Statistical Commission is invited to endorse the establishment of this group.

* E/CN.3/2012/1.

Joint report of Mongolia and Australia on the establishment of an Ulaanbaatar group on statistics for economies based on natural resources

I. Introduction

1. In many countries, the mining industry is developing rapidly, generating substantial increases in revenue and resulting in a rapid growth in those economies based on natural resources. The mining industry's impact on the environment is also expected to increase over time.
2. This new wave of development of the mining industry is posing new challenges to the national statistical institutions of both developed and developing countries with a significant natural resources base. Furthermore, there are deficiencies in the availability of mining statistics that are comparable across countries, which would facilitate trade and investment decisions.
3. It is proposed that a new group, the Ulaanbaatar group on statistics for economies based on natural resources, be established to address methodological issues related to statistics on natural resources and contribute to improving international standards and methods for producing such statistics, by pooling expertise from various countries.
4. The group would deal with statistics on the direct and indirect activities related to and the impact of mining and quarrying. Mining, henceforth understood to include quarrying, is defined as the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas).¹ Direct activities and impacts are those associated with the extraction process itself, including specialized support services. Indirect activities and impacts include those associated with downstream processing, as well as mining-related components of other activities that are closely associated with mining, such as construction, transportation and the provision of technical services. The economic, environmental and social impact would also be considered by the group.

II. Objectives

5. The objectives of the proposed group are the following:
 - (a) To play a leading role in developing methodological and practical guidelines and recommendations by pooling best theoretical and methodological practices, in order to rationally track mining industry activities and accurately measure the industry's contribution to the economy and its impact on other social sectors and the environment within the framework of the System of National Accounts;
 - (b) To serve as a forum for sharing the expertise of national and international statistical organizations and other interested parties;

¹ See *International Standard Industrial Classification of All Economic Activities (ISIC), Rev.4* (United Nations publication, Sales No. E.08.XVII.25)

(c) To collaborate with the United Nations and the specialized agencies on developing and improving statistical methodologies and standards for statistics on natural resources and provide support in this area;

(d) To develop practical manuals and recommendations that ensure coverage and the reliability, accuracy and relevance of statistical data and that are based on best practices, to support the efforts made by countries with large mining sectors to implement the *System of National Accounts 2008*,² the System of Environmental-Economic Accounting and the revised Framework for the Development of Environmental Statistics.

III. Activities

6. To meet the objectives set out above, the group would do the following:

(a) Assess the impact of the mining industry on economies and develop methodological questions and practical recommendations on how to demonstrate the impact in official statistics;

(b) Develop methodologies and indicators for measuring the benefits provided by and the influence exerted over other social sectors by the mining industry;

(c) Develop practical recommendations for measuring and identifying the impact of the mining industry on the environment;

(d) Develop a system of standard indicators for data collection.

7. Some specific issues that could be addressed in the first three of these areas are listed in the annex. A more comprehensive list of activities and associated issues could be drawn up by the group at its first meeting.

8. The group would study good practices, gather expertise and build on work already done by other city groups, including the Oslo Group on Energy Statistics and the London Group on Environmental-Economic Accounting.

IV. Method of operation

9. Members of the Ulaanbaatar group would be invited from national statistical offices, international organizations and relevant academic entities working in the field of natural-resource economics. In addition, relevant policymakers would be invited as advisers to assist the group in understanding the policy issues that the statistics should provide information on.

10. The secretariat for the group will be provided for jointly by the National Statistical Office of Mongolia and the Australian Bureau of Statistics.

11. The group would carry out its work by holding face-to-face meetings (no more than once a year) and through electronic discussion forums. It is proposed that the first meeting of the group be held in the first half of 2012.

² United Nations publication, Sales No. E.08.XVII.29.

12. It is also proposed that the group operate initially for a five-year period, from 2012 to 2016, after which time a review would be carried out to assess whether the group was still needed.

13. The group would report to the Statistical Commission at its sessions in 2013, 2015 and 2017.

V. Points for discussion

14. The Commission is invited to discuss the establishment of the Ulaanbaatar group on statistics for economies based on natural resources, as well as its proposed objectives (see section II of the present report), its activities (section III) and its method of operation (section IV).

Annex

1. Issues that could be addressed within the scope of activity 1 include the following:

(a) The impact of the mining industry on a country's economy could be articulated and analysed. In addition to carrying out their main activities, mining enterprises also engage in the development of infrastructure, including roads, transportation and communications, as well as the service sector. Some of these activities are not currently classified under the mining sector. An assessment of the contribution made by the mining sector could include these indirect contributions;

(b) The mining sector plays an important role in total production and the unit price of mining products could affect the assessment of the contribution to the national economy. The price of mining products fluctuates relatively significantly, influencing estimates of the gross domestic product (GDP) at current and constant prices. Therefore, a methodological assessment should be carried out on the impact of price volatility;

(c) Considering that investment is one the components of GDP estimates, the issue of how to accurately estimate direct foreign investment should also be addressed. There is an urgent need to define an efficient methodology for collecting data on the capital expenditure of mining industries and for information on foreign direct investment for foreign investors.

(d) Indicators for assessing the actual gains made from investment need to be identified;

(e) Methodologies and recommendations for determining the size of the informal mining sector are needed. Due to the specific nature of the mining industry, workers engaged in the informal mining sector are likely to be constantly migrating, moving from site to site, which could hinder their involvement in household surveys. As already mentioned, the price of mining products in the formal sector is high, and the cost of such products in the informal sector, within which mining represents a large share, is also estimated to be large. Therefore, the issue of how to calculate the economic contribution of the informal mining sector should be addressed;

(f) Some mining products are being handled by a single company, which raises the issue of how data confidentiality should be addressed;

(g) The issue of the classification and identification of activities of transnational companies for the accurate estimation of GDP and associated income flows could also be addressed.

2. An issue that could be addressed within the scope of activity 2 is that of the enormous impact of the mining sector on the social sectors. Measuring the influence derived from the benefits arising from and the income generated by the mining sector on the living standards and poverty profile of the population is important. The spillover effects of the mining industry should be identified and studied.

3. Issues that could be addressed within the scope of activity 3 include the following:

(a) How to measure the increasing impact of the mining sector on the environment. The group could improve indicators to estimate the sustainable development of affected countries;

(b) Recommendations should be made with regard to the development of economic accounting systems for the environment and on the development of relevant data sources, as well as on improving understanding of what constitutes a green economy and green growth and on other issues related to sustainable development;

(c) There is an increasing demand for the development of methodologies and the identification of indicators for measuring desertification due to the inappropriate use of mining procedures. There is a need to study the extent of desertification and ways to measure it effectively.

**Economic and Social Council**

Distr.: General
6 December 2011

Original: English

Statistical Commission**Forty-third session**

28 February-2 March 2012

Item 3 (i) of the provisional agenda*

**Items for discussion and decision: information and
communications technology statistics**

**Report of the Partnership on Measuring Information and
Communication Technology for Development¹****Note by the Secretary-General**

In accordance with a request of the United Nations Statistical Commission at its forty-second session, the Secretary-General has the honour to transmit the report of the Partnership on Measuring Information and Communication Technology for Development. The report presents progress made on information and communications technology (ICT) statistics worldwide during the past five years, including the revised and extended core list of ICT indicators developed by the Partnership. It identifies the indicators and countries where most progress has been made and the major data gaps. The report also highlights important statistical challenges and proposes a set of actions to be taken to enhance the availability of internationally comparable indicators on ICT by 2015, the agreed date to review progress made on the Millennium Development Goals and the targets set out by the World Summit on the Information Society. The Commission is requested to express its views on the points for discussion set out in section V of the report.

* E/CN.3/2012/1.

¹ This report is complemented by a background document providing country-level information about the availability of core information and communications technology (ICT) indicators.

Report of the Partnership on Measuring Information and Communication Technology for Development

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I. Introduction

1. The Partnership on Measuring Information and Communication Technology for Development was launched in 2004 to improve the availability of internationally comparable ICT statistics.² Since then, ICT statistics has been a regular item on the agenda of the Statistical Commission and the Partnership reported on its progress in 2005, 2007, 2009 and 2010 (E/CN.3/2005/23, E/CN.3/2007/5, E/CN.3/2009/19 and E/CN.3/2010/28).

2. The Commission considered the topic of ICT statistics as an item for discussion at its thirty-eighth session, in 2007. It endorsed the Partnership's core list of ICT indicators and encouraged countries to use the core list in their data-collection programmes. The Commission further recognized that ICT is a rapidly evolving area and encouraged the Partnership to continue work to improve and update the list of indicators.

3. The need for statistical indicators on ICT developments has been recognized internationally at the highest level. The outcome documents of the World Summit on the Information Society include a set of targets to be achieved by 2015, in line with the target date of the Millennium Development Goals. The World Summit Geneva Plan of Action (2003) acknowledged the role of the Partnership in measuring progress towards the Summit outcomes. The Tunis Agenda for the Information Society (2005) reiterated the importance of measurement, called for the tracking of progress in the use of ICT to achieve internationally agreed goals and referred to the efforts of the Partnership.³

4. Resolutions of the Commission on Science and Technology for Development and the Economic and Social Council give a mandate to the Partnership in monitoring progress in implementation of the outcomes of the World Summit.⁴ In 2008, the Economic and Social Council recommended that the Partnership consider the creation of additional benchmarks and indicators in order to track progress towards the achievement of the World Summit goals. In 2009, it acknowledged the work of the Partnership, its institutional strengthening and the creation of a working group to measure the economic and social impact of ICTs and recommended that it consider the creation of benchmarks and impact indicators for further consideration by the Statistical Commission. In 2011, in resolution E/2011/16, the Economic and Social Council endorsed the work of the Partnership and called upon it to further its work on measuring the impact of ICTs by creating practical guidelines,

² As at November 2011, members of the Partnership were International Telecommunication Union (ITU); Organization for Economic Cooperation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), United Nations Educational, Scientific and Cultural Organization Institute for Statistics (UIS), Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Western Asia (ESCWA), Economic and Social Commission for Asia and the Pacific (ESCAP), Economic Commission for Africa (ECA), Department of Economic and Social Affairs, Eurostat and World Bank. In November 2011, the United Nations Environment Programme (UNEP) secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal submitted an application for membership in the Partnership. Pending the decision of the members, it is expected that the secretariat will become a full member of the Partnership in 2012.

³ See <http://www.itu.int/ws/is/index.html>.

⁴ See Economic and Social Council resolutions E/2008/3, E/2009/7 and E/2011/16.

methodologies and indicators. It also encouraged Governments to collect relevant data at the national level on ICTs, to share information about country case studies and to collaborate with other countries in capacity-building exchange programmes. Finally, it called upon international development partners to provide financial support to further facilitate capacity-building and technical assistance in developing countries.

5. Goal 8, target F of the Millennium Development Goals recognizes the importance of making available the benefits of new technologies, especially ICTs, which are part of the Millennium Development Goals monitoring process. In recognition of the link between the Goals and ICTs and the increasing economic and social impact of ICTs, the Broadband Commission for Digital Development was launched in 2010.⁵ It is advocating for the achievement of four measurable targets by 2015.⁶

6. The year 2015 is approaching rapidly. The preparation of the World Summit for the Information Society 10-year review has started. The Partnership is expected to prepare a quantitative assessment report on the implementation of the World Summit outcomes and the achievement of the targets to support discussions during the 10-year review. There is therefore an urgent need to identify existing data gaps and priority areas in which the availability of ICT statistics should be improved.

7. The present report takes stock of progress made since 2007 when the Commission considered ICT statistics as an item for discussion at its thirty-eighth session. The assessment includes progress made on both methodological aspects and on the availability of internationally comparable ICT indicators. It identifies main data gaps and makes recommendations for action that should be taken in order to improve ICT statistics for effective policymaking.

II. Progress made in the area of information and communications technology statistics since 2007

A. Definitions and statistical standards: core list of information and communications technology indicators

8. One of the main achievements of the Partnership is the establishment of a core list of ICT indicators, which was endorsed by the Commission at its thirty-eighth session, in 2007. Since then, it has served as the basis for the collection of ICT statistics worldwide.

9. Following the Geneva phase of the World Summit in 2003, members of the Partnership started to work with statistical agencies and policymakers to develop an agreed core list of indicators. A number of regional meetings on ICT measurement were held and indicators of interest to policymakers were discussed. A final list was agreed on at the World Summit thematic meeting on measuring the information society, held in Geneva in February 2005.

10. This list, published as *Core ICT Indicators* in 2005, was officially launched at the second phase of the World Summit in Tunis in November 2005. The list included

⁵ See <http://www.broadbandcommission.org>.

⁶ http://www.broadbandcommission.org/Documents/Broadband_Targets.pdf.

41 core indicators covering ICT infrastructure and access; access to and use of ICT by households and individuals; use of ICT by businesses; the ICT sector; and trade in ICT goods. The main purpose of the core list is to help countries that collect (or are planning to collect) ICT statistics to produce high quality and internationally comparable data. In order to achieve this, the indicators have associated statistical standards and metadata.

11. The Partnership and its members are continuously improving the core list, in consultation with member countries, based on data-collection experiences and in light of technological changes. Revisions and additions to the core list were presented as an item for information to the fortieth session of the Commission, in 2009, and noted by members. An important improvement to the first core list was the addition of eight new indicators on measuring ICT in education.

12. The latest addition to the core list is a set of indicators on measuring e-government. The Partnership's Task Group on E-government, led by the Economic Commission for Africa (ECA), in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC), the International Telecommunication Union (ITU) and the Department of Economic and Social Affairs, has produced a report on a framework for developing e-Government indicators.⁷ The framework document proposes a set of seven globally comparative e-government core indicators, reflecting the emphasis on e-government by the World Summit and the suggestion by the Commission that the Partnership extend its core list to include indicators on ICT use in government. Elements of the framework include defined core indicators and associated statistical standards. The document went through a series of reviews by members of the Partnership, in consultation with member countries, before its adoption in November 2011.

13. The annex to the present report details the 53 indicators that are included in the latest — revised and extended — version of the Partnership core list of ICT indicators.

14. The methodological work carried out by the Partnership benefited greatly from the effort of making the best use of existing competencies in each partner organization. At the same time, this helped to avoid overlaps in the respective mandated areas of work of the different partners. There has been continued collaboration with national statistical offices in the development of methodologies and in the implementation of activities by partners; national statistical offices have thus had a dual role as both contributors and beneficiaries. Partner activities have been carried out with a range of stakeholders in the area of ICT statistics and policy, including relevant ministries.

15. In 2010, the Partnership created a new task group, led by ITU, to develop indicators to measure the World Summit targets. The targets consider the information society as a whole and go beyond the areas covered by the Partnership core indicators, including subjects such as health, online content, language diversity on the Internet and connecting scientific and research centres.

16. Reflecting the multi-stakeholder nature of the World Summit, this task group welcomes the contribution of relevant actors external to the Partnership. As a first output, it has prepared a statistical framework document for measuring the World

⁷ This work benefited from the financial support of the Government of Finland.

Summit targets at the national level, which proposes measurable indicators along with their definitions and model questions. The Partnership launched the publication *Measuring the WSIS Targets: A Statistical Framework* at the World Summit Forum in Geneva in May 2011.⁸ The framework is meant to serve as a basis for national and international data collection related to the World Summit outcomes. It is expected to become the major reference document for the World Summit 10-year quantitative review document.

17. The Partnership is involved in a number of other activities that support its mission of achieving internationally comparable and reliable ICT statistics. They include the compilation and dissemination of ICT data, and the provision of technical assistance to enable statistical agencies to collect the data that underlie the core indicators.

18. In the area of capacity-building, the combined efforts of the Partnership organizations continue to enable many developing countries to benefit from tailor-made technical assistance and training. The capacities of developing countries to produce internationally comparable ICT statistics have been significantly enhanced by a range of initiatives. However, this effort is far from complete. Some regions and countries have not yet benefited from capacity-building and there is demand for distance-learning activities and training of trainers at the regional level, which would help to develop the capacities of countries in a cost-effective way. The availability of resources will be key to future success in this area.

19. Many least developed countries lack the resources to carry out ICT surveys and therefore still lack national baseline data on the sector. While significant resources are being allocated to finance a variety of statistical surveys in developing countries, there is an overall lack of funding for ICT surveys, which needs to be addressed urgently.

B. Data availability

20. In 2005, when the Partnership core list was first presented, the collection of official ICT statistics was still relatively unknown outside the countries of the Organization for Economic Cooperation and Development (OECD). The exceptions were telecommunication statistics, which have been collected for decades by ITU from national administrative sources. They include both traditional indicators, such as fixed telephone lines and traffic, as well as more recent indicators such as mobile cellular subscriptions, broadband Internet subscriptions and Internet bandwidth.

21. One of the key challenges related to ICT statistics is the rapid pace with which technologies develop and spread, and the rapid uptake of ICTs in all countries. For example, accessing the Internet through mobile devices was almost non-existent in 2005, whereas the 1.2 billion mark for mobile broadband subscriptions was reached in 2011. In addition, ICT use is not confined to certain groups or sectors of society. Falling prices for both services and devices brings ICTs within the reach of all people and economic sectors in an ever-growing global information society. Monitoring these trends requires continuous data collection, revision of definitions and development of new indicators (see sect. III below).

⁸ Available at http://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-MEAS_WSIS-2011-PDF-E.pdf.

22. This section compares data availability for the Partnership core ICT indicators between 2005 and 2010. It does not include the latest addition of e-government indicators. The results show that significant progress has been made in measuring household access to the Internet (including by type of access, narrowband or broadband), use of the Internet and mobile telephones, as well as in almost all of the ICT business indicators. The indicators on ICT in education have not yet been collected at the global level but for those countries where they have been collected, most progress has been made in measuring school access to the Internet and school use of radio for educational purposes. Major data gaps still exist when it comes to measuring the use of ICTs by individuals and business employees, as well as data capturing the contribution of the ICT sector in countries (e.g. value added).

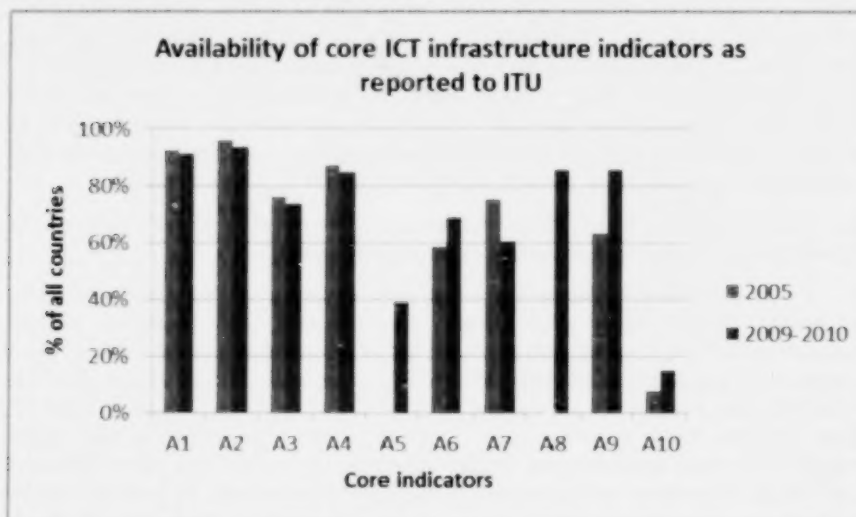
23. Detailed country-level information about the availability of each indicator is provided in the background document to the present report.

24. ICT infrastructure indicators are the most widely available among the core indicators. They usually come from administrative data sources, mainly telecommunication operators, and are collected by Governments at the national level (ministries or regulatory authorities) and by ITU at the global level. For some of the indicators, data availability was already fairly high in 2005 (see figure 1 below).⁹ These include fixed telephone lines, mobile cellular subscriptions and fixed broadband Internet subscriptions. Others did not exist in 2005 and have increased significantly since then, such as mobile broadband subscriptions, an indicator which in 2010 was collected/reported by 34 per cent of countries. Indicator A8 (fixed broadband Internet tariff), while in principle available since 2005, was not collected by ITU until 2008. Indicator A10 (localities with Internet access) has proven to be difficult to collect. It will therefore be removed from the ITU questionnaire and is likely to be removed from the core list in the next revision. For some of the indicators (usually those highest in demand by users), ITU produces and disseminates estimates when official data are not available.

⁹ See annex for an explanation of the list of indicators in figure 1.

Figure 1

Availability of core indicators on information and communications technology infrastructure as reported to the International Telecommunication Union, 2005 and 2009-2010 (percentage of countries)



Source: ITU.

25. Much progress has been made in terms of the indicators for household ICT access, including in developing countries (see figure II below). In particular, data on whether households have Internet access or a computer are now being collected by more than 100 countries worldwide, including more than 80 per cent of countries in Europe, 41 per cent of countries in the Asia-Pacific region, 50 per cent in Western Asia, 67 per cent in Central Asian and South-Eastern European Countries and 55 per cent of countries in Latin America and the Caribbean. The number of States Members of the United Nations collecting data on households with Internet access has increased from 65 to 98 between 2003-2005 and 2008-2010. Around 20 per cent of countries in Africa collect this indicator, compared with 4 per cent in 2005. Traditional indicators, such as whether households have television or radio, are becoming less relevant and hence are less collected globally than five years ago. However, they remain relevant in many African countries where they are collected more often than households with a computer or the Internet. For some of the indicators (usually those highest in demand by users), ITU produces and disseminates estimates when official data are not available.

26. A major achievement was the inclusion of eight core household indicators in the 2008 revision of the United Nations *Principles and Recommendations for Housing and Population Censuses, Revision 2*.¹⁰ This has led many developing countries to include some ICT questions in the latest census round. Most progress has been made in respect of indicator HH6 (households with Internet), but indicators HH3 (households with mobile telephone) and HH4 (households with computer) also showed a notable increase in 2010 compared with the 2000 census round.

¹⁰ Available at http://unstats.un.org/unsd/demographic/sources/census/docs/P&R_Rev2.pdf.

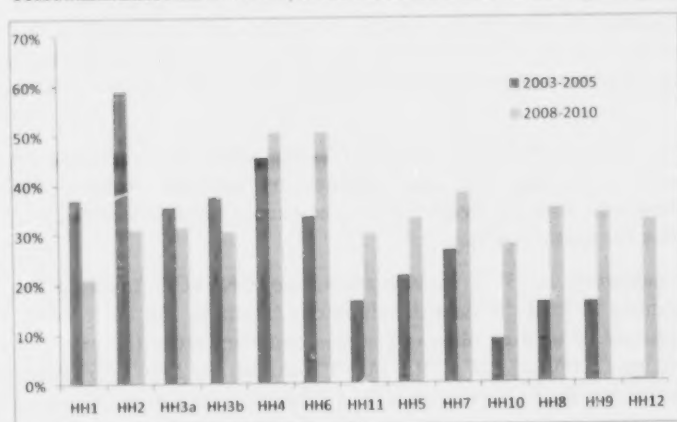
Nevertheless, international standards and definitions are not always applied and therefore some of the data are not comparable.

27. There is much less information available on indicators of the use of ICTs by individuals — with the exception of Europe and the OECD countries in general — but they have grown significantly over the past five years. Figure II below shows the substantial progress that has been made in the availability of core indicators HH5, 7, 8, 9 and 10 and HH12 (see annex for the list of household indicators). These indicators provide important insights into who is on the Internet (according to age, gender, education level and location), where people access the Internet, how much time they spend on it and what they actually do when online. For policy and analytical purposes, such data are critical to assessing the impact of ICTs on socio-economic change. Data on ICT access in households and use by individuals are collected annually by ITU via a questionnaire sent to national statistical offices.

28. As a minimum requirement, all countries should collect indicators HH5 (individuals using a computer), HH7 (individuals using the Internet) and HH10 (individuals using a mobile telephone). HH7 is one of the most demanded among the core ICT indicators. It is also one of the indicators for the Millennium Development Goals and an indicator for measuring progress on the World Summit outcomes and the targets set by the Broadband Commission. While good progress has been made, in 2010 only 35 developing economies were collecting this indicator and only 23 were collecting indicator HH10. For countries where no data on Internet users are available, ITU makes estimates. HH10 is necessary to capture the real use of mobile telephones — especially in developing countries — and therefore the widely appraised development potential of mobile telephony. The commonly available — and used — indicator A2 (mobile cellular subscriptions per 100 inhabitants) includes double counting and has surpassed the 100 per cent mark in most countries; it therefore does not provide accurate information on how many people are using a mobile telephone.

Figure II

Availability of core indicators on household information and communications technology access and individual use as reported to the International Telecommunication Union, 2003-2005 and 2008-2010 (percentage of countries)



Source: ITU.

29. In the case of ICT indicators related to the information economy, there was a significant increase in the data collected and made available by the United Nations Conference on Trade and Development (UNCTAD) between 2005 and 2010. The number of countries for which the core indicators on ICT use by businesses and on the ICT sector are available, has risen over the past five years, as illustrated in table 1 below.

30. Based on the Partnership core indicators, the Network of the United Nations Educational, Scientific and Cultural Organization (UNESCO) Chairs in communications (Orbicom) carried out five country studies (in Brazil, Cameroon, Egypt, India and Malaysia) to measure the ICT sector and analyse where the gaps lie. In order to add to these country case studies and to help improve comparability of national data and ICT trends in the Asia-Pacific region, the Economic and Social Commission for Asia and the Pacific (ESCAP) plans to contribute to the measurement of these trends by including three additional country studies, which will be carried out in consultation with interested countries in South-East Asia, South Asia and Central Asia.

Table 1

Number of countries reporting core indicators on the information economy to the United Nations Conference on Trade and Development, 2005 and 2010

<i>Number of countries for which data are available by indicator</i>	<i>B1</i>	<i>B2</i>	<i>B3</i>	<i>B4</i>	<i>B5</i>	<i>B6</i>	<i>B7</i>	<i>B8</i>	<i>B9</i>	<i>B10</i>	<i>B11</i>	<i>B12</i>	<i>ICT1</i>	<i>ICT2</i>
2005	40	31	42	30	42	36	39	39	36	14	33	39	40	36
2010*	68	57	69	55	68	60	64	64	63	60	59	63	52	46

Note: * Refers to availability of indicators between 2007 and 2009.

Source: UNCTAD information economy database.

31. For core indicators on the use of ICT in enterprises (indicators B1 to B12 in the annex), data availability has increased on average by about two thirds. The increase is most pronounced for developing and transition economies. Between 2005 and 2010, the number of developing countries reporting core indicators on ICT use in business grew from 10 to 27, an increase of 170 per cent. During the same period, the number of countries reporting core indicators on the ICT sector rose by about one third.

32. Data on trade in ICT goods (ICT3 and ICT4 in the annex) are produced by analysing international trade data that are collected by national customs and compiled at the international level in databases such as United Nations Comtrade.¹¹ Such data are available for most countries.

33. For the core indicators on ICT in education, the UNESCO Institute for Statistics (UIS) continues to lead the data development efforts in the Partnership. Given the relative paucity of data as observed across countries from the previous ICT in education scoping (2006/07) and pilot (2009/10) studies, in 2010 UIS started to focus the roll-out strategy for its survey on ICT in education on a demand-driven

¹¹ United Nations Commodity Trade Statistics Database, see <http://comtrade.un.org/>.

basis, starting with a region — Latin America and the Caribbean — where there is a clear need as evidenced by the existence of an explicit regional policy framework on ICT in education. Between late 2010 and March 2011, UIS conducted a region-wide data-collection exercise on the use of ICT in education in all countries of Latin America and the Caribbean. This initiative was aimed at generating core indicators on ICT in education to monitor related World Summit targets, as well as contributing to the statistical requirements of the regional information and communication technologies for development policy platform, the Regional Action Plan on the Information Society (eLAC2015) monitored jointly by the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) and the Statistical Conference of the Americas established by ECLAC (see also section III below).

34. The UIS regional questionnaire on ICT in education has been successfully completed by 38 countries and territories out of a total of 40 targeted (a 95 per cent response rate). The preliminary results, which were shared with participating countries in a peer review workshop (held in Sao Paulo, Brazil, on 29 and 30 September 2011) showed an appreciable number of countries in the region able to produce the core indicators for ICT in education. The detailed outcomes of the survey will be released during the first quarter of 2012 in the form of an analytical report featuring the overall profile of the integration by Latin American and Caribbean countries of ICTs into their primary and secondary schools. UIS plans to extend its regional roll-out strategy to Asia and the Pacific in 2012.

35. The core indicators on ICT in government are the most recent addition to the Partnership core list and have not yet been widely tested. Their objective is to support the efforts of countries in the collection of e-government statistics. Drawing upon the approach of the Department of Economic and Social Affairs to the measurement of e-government, particular attention has been paid to providing a measurement approach that is feasible for developing countries and supports their efforts to utilize e-government for the benefit of citizens and businesses. A methodological manual on the collection of the data required to construct the core e-government indicators in countries will be produced by ECA and other Partnership members in 2012. Moreover, capacity-building workshops are planned to train statisticians and other stakeholders, following the completion of the manual.

36. Finally, the indicators identified to measure the World Summit targets include several of the Partnership core indicators on ICT infrastructure and ICTs in households, education and government. In addition, they address areas such as ICTs in health, language diversity on the Internet, online content and connecting public institutions such as museums, archives, libraries and scientific and research centres. Data availability for those indicators is still limited, especially in developing countries. The Partnership has identified measurable indicators for each of the World Summit targets and some countries have started to use them for national data collection. In view of the forthcoming global World Summit 10-year review in 2014-2015, the demand for statistical indicators to assess progress in the global information society is expected to increase significantly over the next few years. In support of the review, ESCAP, in cooperation with ITU, UNCTAD and other organizations of the United Nations system, plans to convene a meeting of senior ICT policymakers to review at the regional level the implementation of the World Summit targets in order to assess progress achieved and identify remaining gaps that need to be addressed in a post-World Summit 2015 scenario.

III. Statistical challenges and future work

37. The above assessment has illustrated the significant progress made on ICT statistics over the past five years, in particular in terms of defining indicators and providing methodological guidelines for data collection. This has resulted in an improved availability of policy-relevant internationally comparable indicators.

38. Despite these improvements, major ICT data gaps remain, in particular in developing countries. This concerns, among others, the availability of statistics on ICT use by individuals, businesses, governments and other public sector organizations, the ICT sector itself, and data related to online security and cybercrime, gender and youth, and cultural and environmental aspects.

39. This is even more critical given that more than 80 per cent of countries worldwide have established, and are implementing, national ICT policies and strategies and many others are defining and implementing national broadband plans. The growing information society will increasingly require more and better statistics to assess the social, economic and environmental impacts of ICTs. To achieve this, a number of issues need to be addressed.

40. First, the coordination of data collection at the national level needs strengthening. Among the institutional challenges to producing ICT statistics and indicators, the most relevant is the establishment of coordination mechanisms between relevant institutions, including national statistical offices, telecommunication regulatory authorities and ministries responsible for ICT policies. Since survey-based ICT statistics is still a relatively new field in many developing countries, the initiative to produce ICT data often originates from a demand by policymakers. Traditionally, telecommunication statistics have been collected by national telecommunication regulators or ministries, based on administrative sources and therefore it is not always obvious to turn to national statistical offices for the collection of survey data on ICT access and use. Furthermore, the cross-cutting nature of ICTs requires the involvement of line ministries dealing with culture and education, health, economics and agriculture, which may include questions related to ICT in their surveys or obtain them from administrative records.

41. Second, ICT statistics need to be incorporated into statistical work programmes at the country and regional levels, especially in developing countries. By including the implementation of ICT surveys in their regular national work programmes and national statistical strategies or master plans, developing countries may be able to secure financing for stand-alone surveys on the topic.

42. A good best practice example for enhancing the availability of ICT statistics at the national and regional levels by mainstreaming the topic into the ongoing statistical work can be found in Latin America. In 2005, the Statistical Conference of the Americas of ECLAC created a working group on ICT, with the objective of contributing to the development and dissemination of statistics and indicators relating to ICT and their comparability at the regional level through the sharing of national experiences and harmonization of methodologies. Since its inception, the group has coordinated all its activities with the Observatory for the Information Society in Latin America and the Caribbean (OSILAC), which has enabled it to share experiences on measuring access to and use of ICT in the region. The group has also served as a forum for discussing and disseminating the methodological issues and indicators proposed by the Partnership by fostering the implementation

and harmonization of statistics on ICT in the region and facilitating the development by ECLAC of a regional database on ICT statistics. The working group, which is coordinated by the representative of the national statistical office of the Dominican Republic, meets regularly and has engaged in a number of activities, including the organization of regional workshops, the development of methodological material and a compendium of best practices. The group reports regularly to the Statistical Conference of the Americas on progress made. In addition, the group has become the core of an indicators commission that will help define the indicators to measure the targets of the Regional Action Plan on the Information Society (eLAC2015). The Commission brings together national statistical offices and institutions dealing with ICT policies to start discussions to improve the measurement and follow-up of ICT policy targets.

43. Third, in the absence of timely official statistics, third-party (non-official) data sources on ICT are emerging. Consultancy firms specializing in ICT, as well as telecommunication/ICT companies, collect, analyse and disseminate data, while often not providing much information about sources, definitions and methodologies associated with the data. Furthermore, private institutions, such as industry associations or national observatories concerned with the development of the information society, also have an interest in implementing surveys, which are not necessarily coherent with official data and do not necessarily follow international standards. As a result, the data may not be representative for the country or internationally comparable. On the other hand, some of the data/forecasts published by private companies provide important information on the development of the Internet and website usage (e.g. the use of social media sites), which complements official data.

44. Fourth, new indicators, standards and definitions need to be developed. In view of the rapid changes in technologies, services and devices, ICT statistics is an area that needs to undergo continuous review. Moreover, since ICTs permeate all economic and social sectors, the demand for statistics in areas not yet covered by the Partnership core list of indicators is growing, such as ICTs in health or agriculture. Voices have also been heard urging that statistics unveiling some of the negative aspects related to ICTs should be made available, such as those related to security (including child online safety) and environmental effects. In this context, the expected addition of the secretariat of the Basel Convention to the Partnership will provide an excellent opportunity to launch discussions at the international level on the measurement of e-waste. The development of new standards and indicators will require the active participation of countries in ongoing forums and expert groups organized regularly by the Partnership and its member organizations.¹²

45. Finally, there is still a significant need for more capacity-building to speed up the production of core indicators for many developing countries. This applies to both old and new indicators. In this context, donor support is essential to allow for an expansion of technical assistance. The process to improve data availability to support ICT policies needs to be accelerated if the international community and

¹² For example, the ITU World Telecommunication/ICT Indicators Meeting (WTIM) and Expert Group on Telecommunication/ICT Indicators (EGTI), the OECD Working Party on Indicators for the Information Society (WPIIS), the Eurostat Working Group on Information Society Statistics and the SCA-ECLAC Working Group on ICT.

individual countries are to conduct any significant review of the progress on the information society and ICTs for development by 2015.

IV. Conclusions and recommendations

46. During the past five years, the collection and dissemination of ICT statistics has improved significantly. Based on the work of the Partnership, internationally comparable indicators are widely available and increasingly collected at the national level. Most progress has been made on collecting ICT indicators through household surveys.

47. The analysis provided in the present report has shown, however, that significant gaps remain when it comes to ICT statistics, especially in developing countries. In particular, statistics are limited on ICT use by individuals, businesses, Governments and other public sector organizations, as well as the ICT sector itself. Data availability is also closely related to national income, with the least data available in low-income and least developed countries (see country-level data provided in the background document to the present report).

48. In the coming years, the demand for ICT data will increase even more, in view of the growth of the information society and its impact on other sectors. The year 2015 is the agreed date to review progress made on the achievements of the Millennium Development Goals and the targets set by both the World Summit on the Information Society and the Broadband Commission. Statistical indicators will be crucial for assessing the state of advancement of countries in the access to and use and impact of ICTs.

49. In order to improve the availability of ICT statistics, the report has identified a number of challenges that need to be addressed and has provided suggestions on what could be done to overcome them. These recommendations can be summarized as follows:

(a) The data collection and dissemination related to the core list of ICT indicators should be enhanced at both the national and international levels, based on international standards and definitions;

(b) ICT statistics should be included in national strategies for the development of statistics and in regional statistical work programmes, taking as an example the lessons learned from the Working Group on ICT indicators of the ECLAC Statistical Conference of the Americas;

(c) The coordination of data collection at the national level should be enhanced by setting up coordination mechanisms between relevant institutions, including national statistical offices, telecommunication regulatory authorities and ministries responsible for ICT policies, including line ministries;

(d) Indicators for new areas (e.g. health, e-waste) should be developed by the Partnership in close coordination with national statistical organizations and other national relevant institutions in order to reflect national priorities;

(e) Local statistical capacity should be strengthened by assessing capacity needs and delivering targeted training on ICT statistics.

V. Points for discussion by the Commission

50. The Commission is invited to:

- (a) Review and comment on the progress made on ICT statistics during the past five years;
- (b) Endorse the revised and extended core list of ICT indicators in the annex to the present report;
- (c) Review and endorse the recommendations proposed to improve ICT statistics;
- (d) Express continued support for the work of the Partnership on Measuring Information and Communication Technology for Development.

Annex**Partnership on Measuring Information and Communication Technology for Development revised and extended core list of information and communications technology indicators**

A1	Fixed telephone lines per 100 inhabitants
A2	Mobile cellular telephone subscriptions per 100 inhabitants
A3	Fixed Internet subscribers per 100 inhabitants
A4	Fixed broadband Internet subscribers per 100 inhabitants
A5	Mobile broadband subscriptions per 100 inhabitants
A6	International Internet bandwidth per inhabitant (bits/second/inhabitant)
A7	Percentage of the population covered by a mobile cellular telephone network
A8	Fixed broadband Internet access tariffs per month in United States dollars and as a percentage of monthly per capita income
A9	Mobile cellular telephone prepaid tariffs per month in United States dollars and as a percentage of monthly per capita income
A10	Percentage of localities with public Internet access centres (PIACs)
HH1	Proportion of households with a radio
HH2	Proportion of households with a television
HH3	Proportion of households with telephone
HH4	Proportion of households with a computer
HH5	Proportion of individuals who used a computer in the past 12 months
HH6	Proportion of households with Internet access
HH7	Proportion of individuals who used the Internet in the past 12 months
HH8	Location of individual use of the Internet in the past 12 months
HH9	Internet activities undertaken by individuals in the past 12 months
HH10	Proportion of individuals who used a mobile cellular telephone in the past 12 months
HH11	Proportion of households with access to the Internet by type of access
HH12	Frequency of individual use of the Internet in the past 12 months
B1	Proportion of businesses using computers
B2	Proportion of persons employed routinely using computers
B3	Proportion of businesses using the Internet
B4	Proportion of persons employed routinely using the Internet

B5	Proportion of businesses with a Web presence
B6	Proportion of businesses with an Intranet
B7	Proportion of businesses receiving orders over the Internet
B8	Proportion of businesses placing orders over the Internet
B9	Proportion of businesses using the Internet by type of access
B10	Proportion of businesses with a local area network (LAN)
B11	Proportion of businesses with an Extranet
B12	Proportion of businesses using the Internet by type of activity
ICT1	Proportion of total business sector workforce involved in the ICT sector
ICT2	ICT sector share of gross value added
ICT3	ICT goods imports as a percentage of total imports
ICT4	ICT goods exports as a percentage of total exports
ED1	Proportion of schools with a radio used for educational purposes
ED2	Proportion of schools with a television used for educational purposes
ED3	Proportion of schools with a telephone communication facility
ED4	Learners-to-computer ratio in schools with computer-assisted instruction
ED5	Proportion of schools with Internet access by type of access
ED6	Proportion of learners who have access to the Internet at school
ED7	Proportion of learners enrolled at the post-secondary level in ICT-related fields
ED8	Proportion of ICT-qualified teachers in schools
EG1	Proportion of persons employed in central Government organizations routinely using computers
EG2	Proportion of persons employed in central Government organizations routinely using the Internet
EG3	Proportion of central Government organizations with a local area network (LAN)
EG4	Proportion of central Government organizations with an Intranet
EG5	Proportion of central Government organizations with Internet access, by type of access
EG6	Proportion of central Government organizations with a Web presence
EG7	Selected Internet-based online services available to citizens, by level of sophistication of service

**Economic and Social Council**

Distr.: General
16 December 2011

Original: English

Statistical Commission**Forty-third session**

28 February-2 March 2012

Item 3 (j) of the provisional agenda*

Items for discussion and decision**National quality assurance frameworks****Report of the Secretary-General***Summary*

The present report was prepared at the request of the Statistical Commission at its forty-first and forty-second sessions (see E/2010/24, chap. I.B, decision 41/101, and E/2011/24, chap. I.B, decision 42/115). The report describes the work carried out by the Expert Group on National Quality Assurance Frameworks, in line with the mandate given by the Commission, namely, (a) to develop a generic national quality assurance framework template while taking the existing quality frameworks into account and establishing a mapping to them; (b) to compile a set of guidelines to accompany the template; (c) to compile a glossary of the main quality-related terms; (d) to build up an online inventory of documents and links to national and international quality tools and references; and (e) to enhance and update the website on national quality assurance frameworks maintained by the United Nations Statistics Division.

Separate background documents, containing the generic national quality assurance framework template and its accompanying guidelines, lists of tools and references, detailed mapping showing the correspondence to several existing quality frameworks, and links to the online glossary and the National Quality Assurance Frameworks website, are annexed to the present report.

The Commission is invited to endorse the generic national quality assurance framework template and to express its views on the guidelines, glossary, tools and references and website.

* E/CN.3/2012/1.

I. Introduction

1. At its forty-first session, the Statistical Commission had before it a report by Statistics Canada which contained a programme review on national quality assurance frameworks (E/CN.3/2010/2). The report, which was based on a global consultation process, promoted the use of a national quality assurance framework by national statistical offices and described its basic elements. It discussed three different templates for such a framework and then invited an Expert Group (decision 41/101) to take up the task of developing one generic framework template to assist countries that may wish to formulate their own national quality assurance framework or further enhance an existing one. A generic national quality assurance framework template, accompanied by guidelines on how to develop such a framework, was recognized as being more realistic than the development of a generic one-size-fits-all framework, which was considered to be impracticable.

II. Establishment of the Expert Group on National Quality Assurance Frameworks and its programme of work

A. Members of the Expert Group

2. The Expert Group on National Quality Assurance Frameworks was constituted in August 2010. Representatives of the following 17 countries were invited to serve as members of the Expert Group: Canada, Chile, China, Colombia, Egypt, France, Indonesia, Italy, Jamaica, Japan, Mexico, the Niger, Norway, Qatar, South Africa, Switzerland and Ukraine. The Statistical Office of the European Communities (Eurostat), the International Monetary Fund (IMF), the World Bank, the Economic Commission for Africa (ECA), the Economic Commission for Europe (ECE), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Economic and Social Commission for Western Asia (ESCWA) were invited to serve as observers. South Africa agreed to serve as the Chair of the Expert Group, with the United Nations Statistics Division acting as the secretariat.

B. Programme of work

3. In accordance with its terms of reference, the Expert Group's work was carried out entirely through e-mail exchanges and telephone conferences during the early stages. A progress report was submitted to the Statistical Commission at its forty-second session (E/CN.3/2011/33) and summarized the first round of activities and discussions undertaken by the Expert Group, namely, a review of the members' experiences with the development or use of a national quality assurance framework; the problems and obstacles experienced or anticipated in developing and implementing a national quality assurance framework; and opinions from a country perspective on the main needs and priorities vis-à-vis the development and implementation of a national quality assurance framework.

4. The Commission took note of the Expert Group's programme of work for 2010-2011 as presented in the progress report, which contained the following specific elements:

- (a) Development of a generic national quality assurance framework template;
- (b) Mapping of existing frameworks to the template;
- (c) Development of guidelines to accompany the template;
- (d) Identification and review of current quality practices and existing quality mechanisms and tools and inclusion of additional links and documentation thereon at the National Quality Assurance Frameworks website;¹
- (e) Review and clarification of currently used quality terminology and the development of a glossary of quality-related terms;
- (f) Development of training materials to be used in training;
- (g) Identification of practices that constitute desirable minimum standards;
- (h) Drafting of guidelines with best practices, examples and practical measurable indicators.

5. While the initial work of the Expert Group was successfully conducted via e-mail exchanges and telephone conferences, it became apparent that some discussions and decisions needed to be held within a meeting setting that was actual rather than "virtual". Consequently, a meeting of the Expert Group was organized by the Statistics Division, in New York from 28 to 30 September 2011 during which member participants from eight countries, three international agencies and organizations, one United Nations regional commission and the Statistics Division focused, in particular, on the following issues: (a) finalization of the wording and order of the components of the generic national quality assurance framework template; (b) review of the mapping of the National Quality Assurance Frameworks template to other quality frameworks; and (c) agreement on the content of the set of guidelines to accompany the template. Section III below provides a comprehensive and detailed account of the various work elements of the Expert Group as listed in paragraph 4 above.

III. Supporting elements to design a national quality assurance framework

A. The generic national quality assurance framework template

6. The generic national quality assurance framework template developed by the Expert Group is presented in annex I. It is divided into five sections: (a) quality context; (b) quality concepts and frameworks; (c) quality assurance guidelines; (d) quality assessment and reporting; and (e) quality and other management frameworks. The main focus of the work of the Expert Group was on the sections on quality concepts and frameworks and quality assurance.

¹ The National Quality Assurance Frameworks website, maintained by the Statistics Division, can be accessed at <http://unstats.un.org/unsd/dnss/QualityNQAF/nqaf.aspx>.

7. The content of the template was discussed in depth both during e-mail exchanges and at the meeting. Based initially on the three proposals made in the Statistics Canada report to the Statistical Commission at its forty-first session, it ended up incorporating the elements of all three proposals, with some additional elements and reorganization, as agreed upon by the Expert Group members, so as to be suitable for a broad range of countries.

8. The application or implementation of the template is intended to be voluntary, that is to say, the template is not meant to be prescriptive or viewed as a necessary replacement for other quality frameworks that are already adopted or in use by a country's national statistical office. The National Quality Assurance Frameworks template is intended to be a tool for providing the general structure within which individual country-specific national quality assurance frameworks can be developed.

9. Pursuant to paragraph (c) of Statistical Commission decision 41/101, the framework template was designed to be sufficiently flexible to permit national circumstances to be taken into consideration by countries that may choose to apply it. In this regard, the components of the template that might be most applicable and relevant to one country could have a quite different impact on another, depending upon such factors as stage of development, available resources, the institutional environment within which the country operates, and its current most pressing concerns, from a quality policy perspective.

10. National statistical offices are not expected to automatically apply all of the components of the National Quality Assurance Frameworks template, nor is it assumed that the selected elements and mechanisms set out in the accompanying guidelines are exhaustive or could apply to all national statistical offices uniformly and in the same way. Nonetheless, the Expert Group agreed that this template constitutes a useful organizing framework, a single structure within which to record and reference the full range of current quality concepts, policies and practices. By using the recommended structure as a starting point, statistical offices are encouraged to determine by themselves which facets are most appropriate to their specific situations and to build accordingly a framework to fit their needs. Creation of a framework by a national agency for a national agency was the concept guiding the work of the Expert Group.

B. The mapping of the National Quality Assurance Frameworks template to existing frameworks

11. For the development of the National Quality Assurance Frameworks template, the Expert Group, as its point of departure and as recommended by the Statistical Commission, made use of the existing quality frameworks, with which it aligned the National Quality Assurance Frameworks template to the extent possible, so as not to "reinvent the wheel". In the design of the template, the principle of correspondence to the European Statistics Code of Practice, the IMF Data Quality Assessment Framework, the Statistics Canada Quality Assurance Framework and the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean was adhered to as far as possible. The mapping of the National Quality Assurance Frameworks template to each of the above-mentioned frameworks which was carried out by the Expert Group will provide assistance to national statistical offices in harmonizing their quality assurance frameworks with

those of regional or international organizations. A summary correspondence table is presented in annex II to the present document and more detailed information is available on the National Quality Assurance Frameworks website.¹

C. Overview of the National Quality Assurance Frameworks template guidelines

12. The detailed guidelines designed to accompany each element of the template are, owing to their extensiveness, contained in a background document. The guidelines contain general explanatory texts for the components of sections 1, 2, 4 and 5 of the template. The detailed descriptions provided for the template's section 3, the so-called numbered NQAF lines, namely, NQAF1 to NQAF19 (see annex 1) constitute the core of the guidelines. These lines basically correspond to the "principles" in the European Statistics Code of Practice and the "elements" in the IMF Data Quality Assessment Framework. For each numbered NQAF line, a description, followed by elements to be assured (corresponding to the "indicators" used to reflect good practice in other frameworks), as well as supporting mechanisms, are included. When necessary, the same elements and mechanisms have been intentionally repeated across a number of different National Quality Assurance Frameworks lines, so as to underscore the multidimensional aspect of quality and to allow readers to use parts of the framework independently.

13. In respect of designing or reviewing a database, output or specific statistics, data providers who are designing a statistical collection or product that is to be fit for its purpose should find going through the set of questions posed in the lists of elements helpful, as should other readers who are attempting to make informed decisions about whether the statistics produced are fit for use, or are of an acceptable level of quality for their purposes.

14. In order to provide more information and to help the reader "zero in on" additional guidance on the individual NQAF lines, a list of selected references and nationally and internationally developed tools specific to each of the 19 NQAF lines is included in an annex to the guidelines. This list is a subset of the reference list presented alphabetically by country and organization on the National Quality Assurance Frameworks website.

D. United Nations National Quality Assurance Frameworks website

15. As recommended by the Statistical Commission, the Statistics Division continued working on upgrading its quality assurance website, which was developed to serve as a platform for the exchange of information and experiences on national and international quality assurance work. The Chair and the secretariat invited the Expert Group members to continue to provide, on an ongoing basis, new information as it became available as well as additional links and documents on national and international quality work to be included on the website. The Statistics Division collected and posted information on other countries and organizations gathered from the Internet and aims to check regularly for updates. The information on nationally and internationally developed data quality references, arranged by country or organization, is available at the Frameworks website.¹ The future

updating of the website's quality-related references and links will remain part of the work programme of the Statistics Division.

E. Glossary of quality-related terms

16. The Expert Group compiled an online glossary of quality-related terms, whose main source was the Statistical Data and Metadata Exchange (SDMX) Metadata Common Vocabulary, which had been developed by a partnership of international organizations. Since the SDMX Metadata Common Vocabulary is an agreed global standard, preference was given to its definitions in cases where several definitions were available for the same term. In addition to the definition of each term, the National Quality Assurance Frameworks Glossary includes information, whenever possible, in the "context" field so as to provide additional explanations or other useful information that could contribute to an understanding of the concepts. The source of the definition and a hyperlink thereto, when available, are also included. The Glossary is available at the Frameworks website.¹

17. The terms included in the National Quality Assurance Frameworks Glossary are primarily those that appear in the template and the guidelines, especially those that are mentioned in the NQAF lines, or are directly related to them. The Glossary's coverage of terms is not exhaustive, nor is it intended to be. It will continue to be updated by the Statistics Division when additional new and relevant information is provided or identified.

F. Future challenges

18. One of the issues raised by the Statistical Commission entailed the "identification of practices that constituted desirable minimum standards". Having discussed this topic, the Expert Group came to the conclusion that the identification of "minimum standards" would be premature. The institutional arrangements and experiences of countries are too different to allow for meaningful recommendations at this point in time. A basic process of harmonization of tools, and even of language, is considered to be a prerequisite. Thus, the Expert Group focused its work on developing the common framework template and the tools described above. It is hoped that this will enable countries to initiate a process of harmonization of practice.

19. Similarly, the development of practical measurable quality indicators was considered infeasible at this point. However, it should be noted that the detailed supporting questions contained in the guidelines do allow for a comprehensive qualitative description of the degree of quality of a given statistical process or product.

20. Finally, the development of specific training materials based on the tools developed and described above is a challenge for the immediate future. This exercise could and should build on existing materials available at the national and international levels. The comprehensive inventory of materials as contained at the United Nations National Quality Assurance Frameworks website will be a valuable starting point. As a matter of practicality, member countries continue to be encouraged to share their national documentation and experiences as generously as possible.

IV. Global consultation on the National Quality Assurance Frameworks template and guidelines

21. After the preliminary completion of the work of the Expert Group, following the September 2011 meeting in New York, a global consultation process was initiated in November 2011 to solicit comments and feedback from senior managers of national statistical offices and international and regional organizations, with a view to assisting the Expert Group in finalizing the documentation to be submitted to the Statistical Commission. A global consultation document containing the generic national quality assurance framework template and its accompanying guidelines, the list of tools and references, and detailed mapping exhibiting the correspondences to existing quality frameworks, namely, the IMF Data Quality Assessment Framework, the European Statistics Code of Practice, the Statistics Canada Quality Assurance Framework, and the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean, was posted on the National Quality Assurance Framework website. The online glossary and inventory of nationally and internationally developed quality-related references and links are posted on the website as well.

22. Twenty-six countries sent comments during the global consultation round. Many countries explicitly expressed their gratitude to the Expert Group for addressing this important issue. They stressed that it was an opportune moment to undertake this useful exercise, as many countries were in the process of developing their own frameworks. Commentators noted with particular satisfaction that the Expert Group had made the connections to existing frameworks very clear and transparent. A number of detailed technical comments and suggestions were made which the Expert Group had taken into consideration at the time of the writing of the present report. Some countries commenting on the work of the Expert Group suggested that additional work might be needed, in particular on giving countries practical guidelines, possibly in the form of a manual, regarding the implementation of the national quality assurance framework. The background document to be submitted to the Statistical Commission will reflect consideration of the comments received during the global consultation process.

V. Points for discussion

23. **The Statistical Commission is invited to review and endorse the generic national quality assurance framework template and to express its views on the template's value, for countries that elect to use it, as a tool for formulating and operationalizing national quality assurance frameworks of their own. The Commission is also invited to comment on the guidelines, glossary, mapping, tools and references, and on the United Nations National Quality Assurance Frameworks website, and to offer guidance on possible future directions.**

Annex I

Template for a generic national quality assurance framework (NQAF), as developed by the Expert Group on National Quality Assurance Frameworks

1. Quality context

- 1a. Circumstances and key issues driving the need for quality management
- 1b. Benefits and challenges
- 1c. Relationship to other statistical agency policies, strategies and frameworks and evolution over time

2. Quality concepts and frameworks

- 2a. Concepts and terminology
- 2b. Mapping to existing frameworks

3. Quality assurance guidelines

3a. Managing the statistical system

- [NQAF 1] Coordinating the national statistical system
- [NQAF 2] Managing relationships with data users and data providers
- [NQAF 3] Managing statistical standards

3b. Managing the institutional environment

- [NQAF 4] Assuring professional independence
- [NQAF 5] Assuring impartiality and objectivity
- [NQAF 6] Assuring transparency
- [NQAF 7] Assuring statistical confidentiality and security
- [NQAF 8] Assuring the quality commitment
- [NQAF 9] Assuring adequacy of resources

3c. Managing statistical processes

- [NQAF 10] Assuring methodological soundness
- [NQAF 11] Assuring cost-effectiveness
- [NQAF 12] Assuring soundness of implementation
- [NQAF 13] Managing the respondent burden

3d. Managing statistical outputs

- [NQAF 14] Assuring relevance
- [NQAF 15] Assuring accuracy and reliability

- [NQAF 16] Assuring timeliness and punctuality
- [NQAF 17] Assuring accessibility and clarity
- [NQAF 18] Assuring coherence and comparability
- [NQAF 19] Managing metadata

4. Quality assessment and reporting

- 4a. Measuring product and process quality: use of quality indicators, quality targets and process variables and descriptions
- 4b. Communicating about quality: quality reports
- 4c. Obtaining feedback from users
- 4d. Conducting assessments; labelling and certification
- 4e. Assuring continuous quality improvement

5. Quality and other management frameworks

- 5a. Performance management
- 5b. Resource management
- 5c. Ethical standards
- 5d. Continuous improvement
- 5e. Governance

Annex II

Summary mapping of the generic national quality assurance framework template (section 3) to existing frameworks

Part 1: correspondence between the generic national quality assurance framework template and the European Statistics Code of Practice, the IMF Data Quality Assessment Framework, the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean, and the Statistics Canada Quality Assurance Framework

<i>Generic national quality assurance framework template (NQAF)</i>		<i>European Statistics Code of Practice</i>		<i>International Monetary Fund Data Quality Assessment Framework</i>	<i>Latin America and the Caribbean Regional Code of Good Statistical Practice</i>		<i>Statistics Canada Quality Assurance Framework</i>
3a.	Managing the statistical system						
NQAF1.	Coordinating the national statistical system	CoP. 2.1		DQAF. 0.1.1	LAC. 2.1	LAC. 3.1	CAN 2
		CoP. 2.2		DQAF. 0.1.2	LAC. 2.2	LAC. 3.2	
		CoP. 2.3			LAC. 2.3	LAC. 3.3	
		CoP. 3.3			LAC. 2.4		
		CoP. 3.4					
NQAF2.	Managing relationships with data users and data providers	CoP. 2.3	CoP 9.6	DQAF. 5.3.1	LAC. 2.4		CAN 1
		CoP.7.7	CoP 11.1		LAC. 3.3		
		CoP. 9.1	CoP 11.2				
		CoP. 9.2	CoP 11.3				
		CoP. 9.3	CoP 15.6				
		CoP. 9.4	CoP 15.7				
NQAF3.	Managing statistical standards	CoP. 7.1		DQAF. 3.1.2			CAN 11
		CoP. 7.2					
		CoP. 10.4					
		CoP. 14.3					
		CoP. 15.5					
3b.	Managing the institutional environment						
NQAF4.	Assuring professional independence	CoP. 1.1	CoP. 1.5	DQAF. 1.1.2	LAC. 1.1	LAC. 1.5	CAN 12
		CoP. 1.2	CoP. 1.6	DQAF. 1.1.3	LAC. 1.2	LAC. 1.6	
		CoP. 1.3	CoP. 1.7		LAC. 1.3	LAC. 1.7	
		CoP. 1.4	CoP. 1.8		LAC. 1.4		
NQAF5.	Assuring impartiality and objectivity	CoP. 6.1	CoP. 6.5	DQAF. 1.1.1	LAC. 7.1		CAN 12
		CoP. 6.2	CoP. 6.6		LAC. 7.3		
		CoP. 6.3	CoP. 6.7		LAC. 7.4		
		CoP. 6.4	CoP. 6.8		LAC. 7.5		

Generic national quality assurance framework template (NQAF)		European Statistics Code of Practice		International Monetary Fund Data Quality Assessment Framework	Latin America and the Caribbean Regional Code of Good Statistical Practice		Statistics Canada Quality Assurance Framework
NQAF6.	Assuring transparency	CoP. 6.3		DQAF. 1.2.1	LAC. 7.1		CAN 12
		CoP. 6.4		DQAF. 1.2.2	LAC. 7.2		
		CoP. 6.5		DQAF. 1.2.3	LAC. 10.5		
		CoP. 6.6		DQAF. 1.2.4	LAC. 15.3		
		CoP. 8.6					
NQAF7.	Assuring statistical confidentiality and security	CoP. 5.1	CoP. 5.4	DQAF. 0.1.3	LAC. 4.1	LAC. 4.5	CAN 12
		CoP. 5.2	CoP. 5.5		LAC. 4.2	LAC. 4.6	
		CoP. 5.3	CoP. 5.6		LAC. 4.3	LAC. 4.7	
					LAC. 4.4		
NQAF8.	Assuring the quality commitment	CoP. 4.1		DQAF. 0.4.1	LAC. 6.1	LAC. 6.5	CAN 12
		CoP. 4.2		DQAF. 0.4.2	LAC. 6.2	LAC. 8.1	
		CoP. 4.3		DQAF. 0.4.3	LAC. 6.3	LAC. 8.2	
		CoP. 4.4			LAC. 6.4	LAC. 8.3	
NQAF9.	Assuring adequacy of resources	CoP. 3.1		DQAF. 0.2.1	LAC. 5.1		CAN 12
		CoP. 3.2			LAC. 5.2		
		CoP. 3.3			LAC. 5.3		
		CoP. 3.4			LAC. 5.4		
3c. Managing statistical processes							
NQAF10.	Assuring methodological soundness	CoP. 7.1	CoP. 7.7	DQAF. 2.1	LAC. 9.1		CAN 4
		CoP. 7.2	CoP. 8.2	DQAF. 2.2	LAC. 9.2		CAN 11
		CoP. 7.3	CoP. 8.3	DQAF. 2.3	LAC. 9.3		
		CoP. 7.4	CoP. 8.4	DQAF. 2.4	LAC. 9.4		
		CoP. 7.5	CoP. 8.5		LAC. 9.5		
		CoP. 7.6	CoP. 8.6				
NQAF11.	Assuring cost-effectiveness	CoP. 10.1		DQAF. 0.2.2	LAC. 12.1		
		CoP. 10.2			LAC. 12.2		
		CoP. 10.3			LAC. 12.3		
		CoP. 10.4			LAC. 12.4		
NQAF12.	Assuring soundness of implementation	CoP. 8.1	CoP. 8.5	DQAF. 3.1.1	LAC. 10.1	LAC. 10.4	
		CoP. 8.2	CoP. 8.7	DQAF. 3.3.1	LAC. 10.2	LAC. 10.5	
		CoP. 8.3	CoP. 8.8	DQAF. 3.3.2	LAC. 10.3	LAC. 10.6	
		CoP. 8.4	CoP. 8.9				
NQAF13.	Managing the respondent burden	CoP. 8.7	CoP. 9.3	DQAF. 0.1.4	LAC. 11.1	LAC. 11.4	CAN 10
		CoP. 8.8	CoP. 9.4		LAC. 11.2	LAC. 11.5	
		CoP. 8.9	CoP. 9.5		LAC. 11.3		
		CoP. 9.1	CoP. 9.6				
		CoP. 9.2					

Generic national quality assurance framework template (NQAF)		European Statistics Code of Practice		International Monetary Fund Data Quality Assessment Framework		Latin America and the Caribbean Regional Code of Good Statistical Practice		Statistics Canada Quality Assurance Framework
3d. Managing statistical outputs								
NQAF14. Assuring relevance	CoP. 11.1			DQAF. 0.3.1		LAC. 13.1		CAN 3
	CoP. 11.2					LAC. 13.2		
	CoP. 11.3					LAC. 13.3		
						LAC. 13.4		
NQAF15. Assuring accuracy and reliability	CoP. 8.6			DQAF. 3.2.1	DQAF. 3.5.1	LAC. 10.5	LAC. 14.4	CAN 4
	CoP. 12.1			DQAF. 3.4.1	DQAF. 4.3.1	LAC. 14.1	LAC. 14.5	
	CoP. 12.2			DQAF. 3.4.2	DQAF. 4.3.2	LAC. 14.2		
	CoP. 12.3			DQAF. 3.4.3	DQAF. 4.3.3	LAC. 14.3		
NQAF16. Assuring timeliness and punctuality	CoP. 13.1			DQAF. 3.1.3		LAC. 15.1		CAN 5
	CoP. 13.2			DQAF. 4.1.1		LAC. 15.2		
	CoP. 13.3			DQAF. 4.1.2		LAC. 15.3		
	CoP. 13.4			DQAF. 5.1.3		LAC. 15.4		
	CoP. 13.5					LAC. 15.5		
NQAF17. Assuring accessibility and clarity	CoP. 15.1	CoP. 15.5		DQAF. 5.1.1	DQAF. 5.2.1	LAC. 6.3	LAC. 17.3	CAN 6
	CoP. 15.2	CoP. 15.6		DQAF. 5.1.2	DQAF. 5.2.2	LAC. 7.4	LAC. 17.4	CAN 7
	CoP. 15.3	CoP. 15.7		DQAF. 5.1.4	DQAF. 5.3.2	LAC. 7.5	LAC. 17.5	
	CoP. 15.4			DQAF. 5.1.5		LAC. 17.1	LAC. 17.6	
					LAC. 17.2	LAC. 17.7		
NQAF18. Assuring coherence and comparability	CoP. 14.1			DQAF. 4.2.1		LAC. 16.1		CAN 8
	CoP. 14.2			DQAF. 4.2.2		LAC. 16.2		
	CoP. 14.3			DQAF. 4.2.3		LAC. 16.3		
	CoP. 14.4					LAC. 16.4		
	CoP. 14.5							
NQAF19. Managing metadata	CoP. 15.1							CAN 13
	CoP. 15.5							

**Economic and Social Council**

Distr.: General
16 December 2011

Original: English

Statistical Commission**Forty-third session**

28 February-2 March 2012

Item 3 (j) of the provisional agenda**

Items for discussion and decision**National quality assurance frameworks****Report of the Secretary-General***Summary*

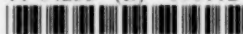
The present report was prepared at the request of the Statistical Commission at its forty-first and forty-second sessions (see E/2010/24, chap. I.B, decision 41/101, and E/2011/24, chap. I.B, decision 42/115). The report describes the work carried out by the Expert Group on National Quality Assurance Frameworks, in line with the mandate given by the Commission, namely, (a) to develop a generic national quality assurance framework template while taking the existing quality frameworks into account and establishing a mapping to them; (b) to compile a set of guidelines to accompany the template; (c) to compile a glossary of the main quality-related terms; (d) to build up an online inventory of documents and links to national and international quality tools and references; and (e) to enhance and update the website on national quality assurance frameworks maintained by the United Nations Statistics Division.

A separate background document, containing the generic national quality assurance framework template and its accompanying guidelines, lists of tools and references, detailed mapping showing the correspondence to several existing quality frameworks, and links to the online glossary and the National Quality Assurance Frameworks website, is also being submitted to the Commission.

The Commission is invited to endorse the generic national quality assurance framework template and to express its views on the guidelines, glossary, tools and references and website.

* Reissued for technical reasons on 6 January 2012.

** E/CN.3/2012/1.



I. Introduction

1. At its forty-first session, the Statistical Commission had before it a report by Statistics Canada which contained a programme review on national quality assurance frameworks (E/CN.3/2010/2). The report, which was based on a global consultation process, promoted the use of a national quality assurance framework by national statistical offices and described its basic elements. It discussed three different templates for such a framework and then invited an Expert Group (decision 41/101) to take up the task of developing one generic framework template to assist countries that may wish to formulate their own national quality assurance framework or further enhance an existing one. A generic national quality assurance framework template, accompanied by guidelines on how to develop such a framework, was recognized as being more realistic than the development of a generic one-size-fits-all framework, which was considered to be impracticable.

II. Establishment of the Expert Group on National Quality Assurance Frameworks and its programme of work

A. Members of the Expert Group

2. The Expert Group on National Quality Assurance Frameworks was constituted in August 2010. Representatives of the following 17 countries were invited to serve as members of the Expert Group: Canada, Chile, China, Colombia, Egypt, France, Indonesia, Italy, Jamaica, Japan, Mexico, the Niger, Norway, Qatar, South Africa, Switzerland and Ukraine. The Statistical Office of the European Communities (Eurostat), the International Monetary Fund (IMF), the World Bank, the Economic Commission for Africa (ECA), the Economic Commission for Europe (ECE), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Economic and Social Commission for Western Asia (ESCWA) were invited to serve as observers. South Africa agreed to serve as the Chair of the Expert Group, with the United Nations Statistics Division acting as the secretariat.

B. Programme of work

3. In accordance with its terms of reference, the Expert Group's work was carried out entirely through e-mail exchanges and telephone conferences during the early stages. A progress report was submitted to the Statistical Commission at its forty-second session (E/CN.3/2011/33) and summarized the first round of activities and discussions undertaken by the Expert Group, namely, a review of the members' experiences with the development or use of a national quality assurance framework; the problems and obstacles experienced or anticipated in developing and implementing a national quality assurance framework; and opinions from a country perspective on the main needs and priorities vis-à-vis the development and implementation of a national quality assurance framework.

4. The Commission took note of the Expert Group's programme of work for 2010-2011 as presented in the progress report, which contained the following specific elements:

- (a) Development of a generic national quality assurance framework template;
- (b) Mapping of existing frameworks to the template;
- (c) Development of guidelines to accompany the template;
- (d) Identification and review of current quality practices and existing quality mechanisms and tools and inclusion of additional links and documentation thereon at the National Quality Assurance Frameworks website;¹
- (e) Review and clarification of currently used quality terminology and the development of a glossary of quality-related terms;
- (f) Development of training materials to be used in training;
- (g) Identification of practices that constitute desirable minimum standards;
- (h) Drafting of guidelines with best practices, examples and practical measurable indicators.

5. While the initial work of the Expert Group was successfully conducted via e-mail exchanges and telephone conferences, it became apparent that some discussions and decisions needed to be held within a meeting setting that was actual rather than "virtual". Consequently, a meeting of the Expert Group was organized by the Statistics Division, in New York from 28 to 30 September 2011 during which member participants from eight countries, three international agencies and organizations, one United Nations regional commission and the Statistics Division focused, in particular, on the following issues: (a) finalization of the wording and order of the components of the generic national quality assurance framework template; (b) review of the mapping of the National Quality Assurance Frameworks template to other quality frameworks; and (c) agreement on the content of the set of guidelines to accompany the template. Section III below provides a comprehensive and detailed account of the various work elements of the Expert Group as listed in paragraph 4 above.

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¹ The National Quality Assurance Frameworks website, maintained by the Statistics Division, can be accessed at <http://unstats.un.org/unsd/dnss/QualityNQAF/nqaf.aspx>.

7. The content of the template was discussed in depth both during e-mail exchanges and at the meeting. Based initially on the three proposals made in the Statistics Canada report to the Statistical Commission at its forty-first session, it ended up incorporating the elements of all three proposals, with some additional elements and reorganization, as agreed upon by the Expert Group members, so as to be suitable for a broad range of countries.

8. The application or implementation of the template is intended to be voluntary, that is to say, the template is not meant to be prescriptive or viewed as a necessary replacement for other quality frameworks that are already adopted or in use by a country's national statistical office. The National Quality Assurance Frameworks template is intended to be a tool for providing the general structure within which individual country-specific national quality assurance frameworks can be developed.

9. Pursuant to paragraph (c) of Statistical Commission decision 41/101, the framework template was designed to be sufficiently flexible to permit national circumstances to be taken into consideration by countries that may choose to apply it. In this regard, the components of the template that might be most applicable and relevant to one country could have a quite different impact on another, depending upon such factors as stage of development, available resources, the institutional environment within which the country operates, and its current most pressing concerns, from a quality policy perspective.

10. National statistical offices are not expected to automatically apply all of the components of the National Quality Assurance Frameworks template, nor is it assumed that the selected elements and mechanisms set out in the accompanying guidelines are exhaustive or could apply to all national statistical offices uniformly and in the same way. Nonetheless, the Expert Group agreed that this template constitutes a useful organizing framework, a single structure within which to record and reference the full range of current quality concepts, policies and practices. By using the recommended structure as a starting point, statistical offices are encouraged to determine by themselves which facets are most appropriate to their specific situations and to build accordingly a framework to fit their needs. Creation of a framework by a national agency for a national agency was the concept guiding the work of the Expert Group.

B. The mapping of the National Quality Assurance Frameworks template to existing frameworks

11. For the development of the National Quality Assurance Frameworks template, the Expert Group, as its point of departure and as recommended by the Statistical Commission, made use of the existing quality frameworks, with which it aligned the National Quality Assurance Frameworks template to the extent possible, so as not to "reinvent the wheel". In the design of the template, the principle of correspondence to the European Statistics Code of Practice, the IMF Data Quality Assessment Framework, the Statistics Canada Quality Assurance Framework and the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean was adhered to as far as possible. The mapping of the National Quality Assurance Frameworks template to each of the above-mentioned frameworks which was carried out by the Expert Group will provide assistance to national statistical offices in harmonizing their quality assurance frameworks with

those of regional or international organizations. A summary correspondence table is presented in annex II to the present document and more detailed information is available on the National Quality Assurance Frameworks website.¹

C. Overview of the National Quality Assurance Frameworks template guidelines

12. The detailed guidelines designed to accompany each element of the template are, owing to their extensiveness, contained in a background document. The guidelines contain general explanatory texts for the components of sections 1, 2, 4 and 5 of the template. The detailed descriptions provided for the template's section 3, the so-called numbered NQAF lines, namely, NQAF1 to NQAF19 (see annex 1) constitute the core of the guidelines. These lines basically correspond to the "principles" in the European Statistics Code of Practice and the "elements" in the IMF Data Quality Assessment Framework. For each numbered NQAF line, a description, followed by elements to be assured (corresponding to the "indicators" used to reflect good practice in other frameworks), as well as supporting mechanisms, are included. When necessary, the same elements and mechanisms have been intentionally repeated across a number of different National Quality Assurance Frameworks lines, so as to underscore the multidimensional aspect of quality and to allow readers to use parts of the framework independently.

13. In respect of designing or reviewing a database, output or specific statistics, data providers who are designing a statistical collection or product that is to be fit for its purpose should find going through the set of questions posed in the lists of elements helpful, as should other readers who are attempting to make informed decisions about whether the statistics produced are fit for use, or are of an acceptable level of quality for their purposes.

14. In order to provide more information and to help the reader "zero in on" additional guidance on the individual NQAF lines, a list of selected references and nationally and internationally developed tools specific to each of the 19 NQAF lines is included in an annex to the guidelines. This list is a subset of the reference list presented alphabetically by country and organization on the National Quality Assurance Frameworks website.

D. United Nations National Quality Assurance Frameworks website

15. As recommended by the Statistical Commission, the Statistics Division continued working on upgrading its quality assurance website, which was developed to serve as a platform for the exchange of information and experiences on national and international quality assurance work. The Chair and the secretariat invited the Expert Group members to continue to provide, on an ongoing basis, new information as it became available as well as additional links and documents on national and international quality work to be included on the website. The Statistics Division collected and posted information on other countries and organizations gathered from the Internet and aims to check regularly for updates. The information on nationally and internationally developed data quality references, arranged by country or organization, is available at the Frameworks website.¹ The future

updating of the website's quality-related references and links will remain part of the work programme of the Statistics Division.

E. Glossary of quality-related terms

16. The Expert Group compiled an online glossary of quality-related terms, whose main source was the Statistical Data and Metadata Exchange (SDMX) Metadata Common Vocabulary, which had been developed by a partnership of international organizations. Since the SDMX Metadata Common Vocabulary is an agreed global standard, preference was given to its definitions in cases where several definitions were available for the same term. In addition to the definition of each term, the National Quality Assurance Frameworks Glossary includes information, whenever possible, in the "context" field so as to provide additional explanations or other useful information that could contribute to an understanding of the concepts. The source of the definition and a hyperlink thereto, when available, are also included. The Glossary is available at the Frameworks website.¹

17. The terms included in the National Quality Assurance Frameworks Glossary are primarily those that appear in the template and the guidelines, especially those that are mentioned in the NQAF lines, or are directly related to them. The Glossary's coverage of terms is not exhaustive, nor is it intended to be. It will continue to be updated by the Statistics Division when additional new and relevant information is provided or identified.

F. Future challenges

18. One of the issues raised by the Statistical Commission entailed the "identification of practices that constituted desirable minimum standards". Having discussed this topic, the Expert Group came to the conclusion that the identification of "minimum standards" would be premature. The institutional arrangements and experiences of countries are too different to allow for meaningful recommendations at this point in time. A basic process of harmonization of tools, and even of language, is considered to be a prerequisite. Thus, the Expert Group focused its work on developing the common framework template and the tools described above. It is hoped that this will enable countries to initiate a process of harmonization of practice.

19. Similarly, the development of practical measurable quality indicators was considered infeasible at this point. However, it should be noted that the detailed supporting questions contained in the guidelines do allow for a comprehensive qualitative description of the degree of quality of a given statistical process or product.

20. Finally, the development of specific training materials based on the tools developed and described above is a challenge for the immediate future. This exercise could and should build on existing materials available at the national and international levels. The comprehensive inventory of materials as contained at the United Nations National Quality Assurance Frameworks website will be a valuable starting point. As a matter of practicality, member countries continue to be encouraged to share their national documentation and experiences as generously as possible.

IV. Global consultation on the National Quality Assurance Frameworks template and guidelines

21. After the preliminary completion of the work of the Expert Group, following the September 2011 meeting in New York, a global consultation process was initiated in November 2011 to solicit comments and feedback from senior managers of national statistical offices and international and regional organizations, with a view to assisting the Expert Group in finalizing the documentation to be submitted to the Statistical Commission. A global consultation document containing the generic national quality assurance framework template and its accompanying guidelines, the list of tools and references, and detailed mapping exhibiting the correspondences to existing quality frameworks, namely, the IMF Data Quality Assessment Framework, the European Statistics Code of Practice, the Statistics Canada Quality Assurance Framework, and the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean, was posted on the National Quality Assurance Framework website. The online glossary and inventory of nationally and internationally developed quality-related references and links are posted on the website as well.

22. Twenty-six countries sent comments during the global consultation round. Many countries explicitly expressed their gratitude to the Expert Group for addressing this important issue. They stressed that it was an opportune moment to undertake this useful exercise, as many countries were in the process of developing their own frameworks. Commentators noted with particular satisfaction that the Expert Group had made the connections to existing frameworks very clear and transparent. A number of detailed technical comments and suggestions were made which the Expert Group had taken into consideration at the time of the writing of the present report. Some countries commenting on the work of the Expert Group suggested that additional work might be needed, in particular on giving countries practical guidelines, possibly in the form of a manual, regarding the implementation of the national quality assurance framework. The background document to be submitted to the Statistical Commission will reflect consideration of the comments received during the global consultation process.

V. Points for discussion

23. The Statistical Commission is invited to review and endorse the generic national quality assurance framework template and to express its views on the template's value, for countries that elect to use it, as a tool for formulating and operationalizing national quality assurance frameworks of their own. The Commission is also invited to comment on the guidelines, glossary, mapping, tools and references, and on the United Nations National Quality Assurance Frameworks website, and to offer guidance on possible future directions.

Annex I

Template for a generic national quality assurance framework (NQAF), as developed by the Expert Group on National Quality Assurance Frameworks

1. **Quality context**
 - 1a. Circumstances and key issues driving the need for quality management
 - 1b. Benefits and challenges
 - 1c. Relationship to other statistical agency policies, strategies and frameworks and evolution over time
2. **Quality concepts and frameworks**
 - 2a. Concepts and terminology
 - 2b. Mapping to existing frameworks
3. **Quality assurance guidelines**
 - 3a. **Managing the statistical system**
 - [NQAF 1] Coordinating the national statistical system
 - [NQAF 2] Managing relationships with data users and data providers
 - [NQAF 3] Managing statistical standards
 - 3b. **Managing the institutional environment**
 - [NQAF 4] Assuring professional independence
 - [NQAF 5] Assuring impartiality and objectivity
 - [NQAF 6] Assuring transparency
 - [NQAF 7] Assuring statistical confidentiality and security
 - [NQAF 8] Assuring the quality commitment
 - [NQAF 9] Assuring adequacy of resources
 - 3c. **Managing statistical processes**
 - [NQAF 10] Assuring methodological soundness
 - [NQAF 11] Assuring cost-effectiveness
 - [NQAF 12] Assuring soundness of implementation
 - [NQAF 13] Managing the respondent burden
 - 3d. **Managing statistical outputs**
 - [NQAF 14] Assuring relevance
 - [NQAF 15] Assuring accuracy and reliability

- [NQAF 16] Assuring timeliness and punctuality
- [NQAF 17] Assuring accessibility and clarity
- [NQAF 18] Assuring coherence and comparability
- [NQAF 19] Managing metadata

4. Quality assessment and reporting

- 4a. Measuring product and process quality: use of quality indicators, quality targets and process variables and descriptions
- 4b. Communicating about quality: quality reports
- 4c. Obtaining feedback from users
- 4d. Conducting assessments; labelling and certification
- 4e. Assuring continuous quality improvement

5. Quality and other management frameworks

- 5a. Performance management
- 5b. Resource management
- 5c. Ethical standards
- 5d. Continuous improvement
- 5e. Governance

Annex II

Summary mapping of the generic national quality assurance framework template (section 3) to existing frameworks

Correspondence between the generic national quality assurance framework template and the European Statistics Code of Practice, the IMF Data Quality Assessment Framework, the Proposal for the Structure of a Regional Code of Good Statistical Practice for Latin America and the Caribbean, and the Statistics Canada Quality Assurance Framework

<i>Generic national quality assurance framework template (NQAF)</i>		<i>European Statistics Code of Practice</i>		<i>International Monetary Fund Data Quality Assessment Framework</i>	<i>Latin America and the Caribbean Regional Code of Good Statistical Practice</i>		<i>Statistics Canada Quality Assurance Framework</i>
3a.	Managing the statistical system						
NQAF1.	Coordinating the national statistical system	CoP, 2.1		DQAF, 0.1.1	LAC, 2.1	LAC, 3.1	CAN 2
		CoP, 2.2		DQAF, 0.1.2	LAC, 2.2	LAC, 3.2	
		CoP, 2.3			LAC, 2.3	LAC, 3.3	
		CoP, 3.3			LAC, 2.4		
		CoP, 3.4					
NQAF2.	Managing relationships with data users and data providers	CoP, 2.3	CoP 9.6	DQAF, 5.3.1	LAC, 2.4		CAN 1
		CoP, 7.7	CoP 11.1		LAC, 3.3		
		CoP, 9.1	CoP 11.2				
		CoP, 9.2	CoP 11.3				
		CoP, 9.3	CoP 15.6				
		CoP, 9.4	CoP 15.7				
NQAF3.	Managing statistical standards	CoP, 9.5					
		CoP, 7.1		DQAF, 3.1.2			CAN 11
		CoP, 7.2					
		CoP, 10.4					
		CoP, 14.3					
NQAF4.	Assuring professional independence	CoP, 15.5					
		CoP, 1.1	CoP, 1.5	DQAF, 1.1.2	LAC, 1.1	LAC, 1.5	CAN 12
		CoP, 1.2	CoP, 1.6	DQAF, 1.1.3	LAC, 1.2	LAC, 1.6	
		CoP, 1.3	CoP, 1.7		LAC, 1.3	LAC, 1.7	
		CoP, 1.4	CoP, 1.8		LAC, 1.4		
NQAF5.	Assuring impartiality and objectivity	CoP, 6.1	CoP, 6.5	DQAF, 1.1.1	LAC, 7.1		CAN 12
		CoP, 6.2	CoP, 6.6		LAC, 7.3		
		CoP, 6.3	CoP, 6.7		LAC, 7.4		
		CoP, 6.4	CoP, 6.8		LAC, 7.5		
3b.	Managing the institutional environment						

<i>Generic national quality assurance framework template (NQAF)</i>	<i>European Statistics Code of Practice</i>		<i>International Monetary Fund Data Quality Assessment Framework</i>	<i>Latin America and the Caribbean Regional Code of Good Statistical Practice</i>		<i>Statistics Canada Quality Assurance Framework</i>
NQAF6. Assuring transparency	CoP. 6.3		DQAF. 1.2.1	LAC. 7.1		CAN 12
	CoP. 6.4		DQAF. 1.2.2	LAC. 7.2		
	CoP. 6.5		DQAF. 1.2.3	LAC. 10.5		
	CoP. 6.6		DQAF. 1.2.4	LAC. 15.3		
	CoP. 8.6					
NQAF7. Assuring statistical confidentiality and security	CoP. 5.1	CoP. 5.4	DQAF. 0.1.3	LAC. 4.1	LAC. 4.5	CAN 12
	CoP. 5.2	CoP. 5.5		LAC. 4.2	LAC. 4.6	
	CoP. 5.3	CoP. 5.6		LAC. 4.3	LAC. 4.7	
				LAC. 4.4		
NQAF8. Assuring the quality commitment	CoP. 4.1		DQAF. 0.4.1	LAC. 6.1	LAC. 6.5	CAN 12
	CoP. 4.2		DQAF. 0.4.2	LAC. 6.2	LAC. 8.1	
	CoP. 4.3		DQAF. 0.4.3	LAC. 6.3	LAC. 8.2	
	CoP. 4.4			LAC. 6.4	LAC. 8.3	
NQAF9. Assuring adequacy of resources	CoP. 3.1		DQAF. 0.2.1	LAC. 5.1		CAN 12
	CoP. 3.2			LAC. 5.2		
	CoP. 3.3			LAC. 5.3		
	CoP. 3.4			LAC. 5.4		
3c. Managing statistical processes						
NQAF10. Assuring methodological soundness	CoP. 7.1	CoP. 7.7	DQAF. 2.1	LAC. 9.1		CAN 4
	CoP. 7.2	CoP. 8.2	DQAF. 2.2	LAC. 9.2		CAN 11
	CoP. 7.3	CoP. 8.3	DQAF. 2.3	LAC. 9.3		
	CoP. 7.4	CoP. 8.4	DQAF. 2.4	LAC. 9.4		
	CoP. 7.5	CoP. 8.5		LAC. 9.5		
	CoP. 7.6	CoP. 8.6				
NQAF11. Assuring cost-effectiveness	CoP. 10.1		DQAF. 0.2.2	LAC. 12.1		
	CoP. 10.2			LAC. 12.2		
	CoP. 10.3			LAC. 12.3		
	CoP. 10.4			LAC. 12.4		
NQAF12. Assuring soundness of implementation	CoP. 8.1	CoP. 8.5	DQAF. 3.1.1	LAC. 10.1	LAC. 10.4	
	CoP. 8.2	CoP. 8.7	DQAF. 3.3.1	LAC. 10.2	LAC. 10.5	
	CoP. 8.3	CoP. 8.8	DQAF. 3.3.2	LAC. 10.3	LAC. 10.6	
	CoP. 8.4	CoP. 8.9				
NQAF13. Managing the respondent burden	CoP. 8.7	CoP. 9.3	DQAF. 0.1.4	LAC. 11.1	LAC. 11.4	CAN 10
	CoP. 8.8	CoP. 9.4		LAC. 11.2	LAC. 11.5	
	CoP. 8.9	CoP. 9.5		LAC. 11.3		
	CoP. 9.1	CoP. 9.6				
	CoP. 9.2					

<i>Generic national quality assurance framework template (NQAF)</i>	<i>European Statistics Code of Practice</i>	<i>International Monetary Fund Data Quality Assessment Framework</i>	<i>Latin America and the Caribbean Regional Code of Good Statistical Practice</i>	<i>Statistics Canada Quality Assurance Framework</i>
3d. Managing statistical outputs				
NQAF14. Assuring relevance	CoP. 11.1	DQAF. 0.3.1	LAC. 13.1	CAN 3
	CoP. 11.2		LAC. 13.2	
	CoP. 11.3		LAC. 13.3	
			LAC. 13.4	
NQAF15. Assuring accuracy and reliability	CoP. 8.6	DQAF. 3.2.1	DQAF. 3.5.1	LAC. 10.5
	CoP. 12.1	DQAF. 3.4.1	DQAF. 4.3.1	LAC. 14.1
	CoP. 12.2	DQAF. 3.4.2	DQAF. 4.3.2	LAC. 14.2
	CoP. 12.3	DQAF. 3.4.3	DQAF. 4.3.3	LAC. 14.3
NQAF16. Assuring timeliness and punctuality	CoP. 13.1	DQAF. 3.1.3		LAC. 15.1
	CoP. 13.2	DQAF. 4.1.1		LAC. 15.2
	CoP. 13.3	DQAF. 4.1.2		LAC. 15.3
	CoP. 13.4	DQAF. 5.1.3		LAC. 15.4
	CoP. 13.5			LAC. 15.5
NQAF17. Assuring accessibility and clarity	CoP. 15.1	CoP. 15.5	DQAF. 5.1.1	DQAF. 5.2.1
	CoP. 15.2	CoP. 15.6	DQAF. 5.1.2	DQAF. 5.2.2
	CoP. 15.3	CoP. 15.7	DQAF. 5.1.4	DQAF. 5.3.2
	CoP. 15.4		DQAF. 5.1.5	
			LAC. 6.3	LAC. 17.3
			LAC. 7.4	LAC. 17.4
			LAC. 7.5	LAC. 17.5
			LAC. 17.1	LAC. 17.6
			LAC. 17.2	LAC. 17.7
NQAF18. Assuring coherence and comparability	CoP. 14.1	DQAF. 4.2.1		LAC. 16.1
	CoP. 14.2	DQAF. 4.2.2		LAC. 16.2
	CoP. 14.3	DQAF. 4.2.3		LAC. 16.3
	CoP. 14.4			LAC. 16.4
	CoP. 14.5			
NQAF19. Managing metadata	CoP. 15.1			
	CoP. 15.5			

**Economic and Social Council**

Distr.: General
20 December 2011

Original: English

Statistical Commission**Forty-third session**

28 February-2 March 2012

Item 3 (k) of the provisional agenda*

**Items for discussion and decision: implementation of the
Fundamental Principles of Official Statistics**

**Implementation of the Fundamental Principles of
Official Statistics****Report of the Secretary-General***Summary*

In accordance with a request of the Statistical Commission at its forty-second session (E/2011/24, chap. I.A), the Commission will have before it a brief progress report on the work of the Friends of the Chair group on the implementation of the Fundamental Principles of Official Statistics. The initial focus of the group is to revise and update the language of the preamble of the Fundamental Principles. The group has also elaborated a detailed time plan for 2012, including a review of the implementation of the Fundamental Principles by Member States and the development of a practical guide for their implementation. The Commission is asked to review the proposal for an updated preamble and to comment on the workplan of the Friends of the Chair group.

* E/CN.3/2012/1.

I. Introduction

1. At its forty-second session, in 2011, the Statistical Commission discussed the implementation of the Fundamental Principles of Official Statistics (see E/2011/24, chap. II.K; see also E/CN.3/2011/17). This discussion also benefited from the in-depth exchange of views among senior official statisticians during a high-level forum, held on 21 February 2011, on the topic "Fundamental Principles of Official Statistics: threats and responses". Several keynote speakers introduced the various principles and discussed the challenges related to their implementation. Furthermore, there was an open debate on possible ways to support improved implementation of the Fundamental Principles.¹

2. In its decision 42/111, the Commission acknowledged that the Fundamental Principles were still as relevant today as they have been in the past and that no revision of the 10 principles themselves was currently necessary. It recommended, however, that the United Nations Statistics Division facilitate the formation of a Friends of the Chair group to revise and update the language of the preamble of the Fundamental Principles in order to take into account new developments since the time when the Principles were first formulated, to assess how they can be re-enforced, and to develop a practical guide for the implementation of the Principles to include new developments and good practices by national statistical offices, other producers and users of statistics. The Commission recommended that the Friends of the Chair group complete its work in full consultation with Member States and report to the Commission before 2014,² in time for the twentieth anniversary of the Fundamental Principles (see E/2011/24, chap. I.B).

3. In the same discussion, the Commission also asked the Statistics Division to work with the regional commissions and other relevant organizations on a programme to undertake a review of the implementation of the Principles, to provide support to Member States as they implement the Principles and to promote the Principles, leading up to an endorsement of the Fundamental Principles by the Economic and Social Council and the General Assembly before 2014.

II. Establishment of the Friends of the Chair and proposed timetable for 2012

A. Members of the Friends of the Chair group

4. The Friends of the Chair on Fundamental Principles of Official Statistics was constituted in September 2011, comprising senior statisticians from the following 12 countries: Australia, Colombia, the Dominican Republic, Germany, Italy, Mexico, Norway, the Philippines, South Africa, the United Kingdom of Great Britain and Northern Ireland, the United Republic of Tanzania and the United States of America. The Statistical Offices of the European Communities and of the Economic Commission for Europe were invited to serve as observers. Katherine Wallman

¹ See http://unstats.un.org/unsd/statcom/statcom_2011/Seminars/High_level_forum/default.html.

² A detailed timetable leading up to the completion of the work of the Friends of the Chair group by the time of the 2013 Statistical Commission is included in section II of the present report.

(United States) agreed to serve as the Leader of the group, with the Statistics Division acting as the secretariat.

B. Programme of work

5. The Friends of the Chair on Fundamental Principles of Official Statistics initiated its work via e-mail exchanges and, in accordance with the decision of the Statistical Commission, identified the following specific deliverables:

- (a) A revision of the preamble of the Fundamental Principles;
- (b) An assessment of how the Fundamental Principles can be re-enforced;
- (c) The development of a practical guide for the implementation of the Fundamental Principles;
- (d) A review of the implementation of the Fundamental Principles by Member States;
- (e) Support to Member States as they implement the Principles;
- (f) A comprehensive report on all activities to the Commission before 2014;
- (g) Submission of the Fundamental Principles with a revised preamble to the Economic and Social Council and the General Assembly.

6. The Friends of the Chair group agreed that the initial focus of its work would be on the revision of the preamble (see sect. III below) as well as on the review of the implementation of the Fundamental Principles. This review would take account of available analyses already conducted by the regional commissions and other relevant organizations as well as a questionnaire for self-assessment to be sent to all Member States. The discussion on how the principles can be re-enforced and what practical guides can be developed to assist countries will then benefit from the results of the review exercise. The task of supporting Member States in the implementation of the Fundamental Principles is considered to be an ongoing task, which will build on existing instruments, such as the *Handbook of Statistical Organization*³ and the country practices database on the Statistics Division website, providing reference material from Member States that is relevant in the context of implementing the Fundamental Principles. With regard to the submission of the Fundamental Principles to the Economic and Social Council and the General Assembly for endorsement, it is noteworthy that this will require a considerable concerted effort. In particular, national statistical agencies will have to make an effort to reach out to their respective representatives in the Council and the Assembly in order to generate sufficient support for the endorsement of the Fundamental Principles at these political levels.

7. Based on the reflections above, the following approximate time plan was proposed by the secretariat and supported by a consensus of the Friends of the Chair:

³ *Handbook of Statistical Organization, Third Edition: The Operation and Organization of a Statistical Agency* (United Nations publication, Sales No. E.03.XVII.7).

First quarter 2012

- Consultation of the Friends of the Chair on a revised preamble
- The Statistical Commission to review the revised preamble
- The Statistics Division, in cooperation with regional partners, to send a questionnaire on the implementation of the Fundamental Principles to Member States

Second quarter 2012

- The Friends of the Chair to finalize the revised preamble based on guidance from the Statistical Commission
- The Statistics Division to analyse the results of the implementation survey and report to the Friends of the Chair
- The Friends of the Chair to initiate discussion on how the principles can be reinforced and on a practical guide for their implementation

Third quarter 2012

- The Friends of the Chair to finalize the documents on how to re-enforce the Fundamental Principles and the practical implementation guide, taking into account inputs from a global consultation exercise

Fourth quarter 2012

- Preparation of the comprehensive report to the Statistical Commission in 2013 (the Friends of the Chair supported by the Statistics Division)

First quarter 2013

- The Statistical Commission to review the work of the Friends of the Chair on Fundamental Principles of Official Statistics and to adopt a resolution requesting the Economic and Social Council and the General Assembly to endorse the Fundamental Principles

Third quarter 2013

- The Economic and Social Council to endorse the Fundamental Principles with a revised preamble

Fourth quarter 2013

- The General Assembly to endorse the Fundamental Principles with a revised preamble

First quarter 2014

- The Statistical Commission celebrates the twentieth anniversary of the Fundamental Principles

8. In order for the work of the Friends of the Chair to be based on a broad spectrum of views, it is beneficial that its efforts are accompanied by an active continued dialogue among Member States at all levels. Opportunities for this will be

offered at the relevant topical and/or regional meetings, such as the plenary seminar of the Conference of European Statisticians, in June 2012, or the International Association for Official Statistics Conference on the theme "Getting our message across: strategies and best practices to ensure the use of statistics in decision-making", to be held in Kiev in September 2012.

III. Revision of the preamble

9. The Commission had invited the Friends of the Chair to revise and update the language of the preamble of the Fundamental Principles in order to take into account new developments since the time when the Principles were first formulated.⁴ At the time of the writing of the present report, the Friends of the Chair group has conducted a first round of discussion on the issues that are proposed to be included in a revised and extended preamble. A large number of members of the Friends of the Chair group contributed to the discussion. The following reflects, although not in an exhaustive manner, some of the proposed elements to be included in the revised preamble:

(a) Evoking the key purpose of the production of official statistics, namely supporting development policy and analysis in its most comprehensive notion, introducing explicitly new aspects such as sustainable development, peace and security and so forth; in this context, referring to the increased use of official data for informed decision-making and monitoring;

(b) Evoking the importance of national, regional and global information systems in an increasingly globalized world; referring in this context to the increased role and responsibility of international and supranational statistical organizations;

(c) Recognizing the largely increased technological possibilities (Internet) — and related responsibilities — of disseminating data to a largely increased and more sophisticated audience and the improved possibilities to actually engage in communication with diverse user groups (for example, through social networking);

(d) Referring to the continuous evolution of scientific methods and the increased availability of new data sources (administrative data) and new data types (geo-referenced information) and in this context, stressing the importance of a sustained process of statistical capacity-building;

(e) Recognizing the increasingly competitive context from non-official data providers and its impact on the official statistical system;

(f) Stating a strong commitment to an expanded notion of quality and quality management based on an effective relationship between data providers, data producers and users;

(g) Emphasizing the essential notions of trust and credibility and in this context, promoting statistical culture;

⁴ For the current version of the preamble, see <http://unstats.un.org/unsd/methods/statorg/FP-English.htm>.

(h) Stating the broad ambition of the Fundamental Principles, that is, in order to be effective, the Principles have to be endorsed and respected at the highest political level and by all stakeholders of the statistical process.

10. Based on these and other proposals, the Friends of the Chair will formulate a concrete proposal for a revised preamble, which will be submitted to the Statistical Commission for review in a background document. The Commission will also receive an oral update on the work of the Friends of the Chair from the Leader of the group.

IV. Points for discussion

11. The Commission is invited to review the proposal for an updated preamble and to comment on the workplan of the Friends of the Chair group.